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223 *Water fowl.*—Water fowl, however, such as ducks (pü'hü), geese (nagü'tᵉ), and swans (wahi'tᵉ), seem to have been hunted to a considerable extent. With the exception of the mud hen (sa'iyü), they were usually shot with the bow. Mud hens were gathered in fall by means of communal hunts headed by a "chief" who organized the expedition. Any man could become such a "chief" by gathering a party of eight to fifteen men. All of these proceeded to the lake where one of them embarked on a balsa while the others remained on shore. The man on the balsa frightened the birds, driving them toward shore into the hands of the waiting hunters. The birds were captured and dispatched with sticks; sometimes they were caught with dogs. Women occasionally assisted the men on shore.

Ducks were plentiful in the fall. The hunter concealed himself in a brush blind (pai'kwa'ni) early in the morning. He shot four or five birds before startling the flock and continued shooting as they flew. According to Joshua, ducks were hunted with the aid of one or two decoys (pühü-dua') to which long strings were attached. The duck skin was stuffed with grass and could be dried and used again. He stated that these decoys were used on Cowhead lake, but the remainder of informants, both from Bidwell and Beatty, claimed that they were not used locally. Ducks were never taken in nets.

Swans are said to have approached of their own accord and without the lure of a decoy. Young geese unable to fly were captured on the lake from a balsa. Geese were also frightened to shore where the women grabbed them and dispatched them with a stick. Eight or ten geese were taken this way. Occasionally an individual trapped geese the same way as sage hens. There was no "chief" for goose hunting because only a few persons participated. In the fall, Goose Lake valley was visited by birds which informants called cranes (wasa'). The small birds, large enough to be eaten but too small to fly, were shaken from the trees.

●222 *Insects, etc.*—Crickets[46] (ni'su') were found in late summer on the slopes of hills. They were collected early in the morning when cold and benumbed. Women usually did the gathering, but men occasionally assisted. The insects were picked up in the hand and dumped into the carrying basket. All informants explicitly denied beating the brush and driving the crickets into a pit. One informant stated that "the whites did that when they wanted to kill them." Grasshoppers

[46] These were described as "two finger joints in length" and as "traveling in bunches." Professor Essig says they are almost certainly Mormon or Western crickets.

222 (hu· 'adada·^{a})[44] were never eaten but an unidentified insect similar to the grasshopper was considered edible. Ants (a· 'ni) were gathered early in the morning when they were bunched on the top of the hill. Ant eggs (a· 'ninoho) were gathered. "Worms" or larvae of some sort, probably caterpillars[45] (called biũ· 'gũ), were gathered early in the morning. They did not come every year and nowadays are never found in this vicinity. My interpreter saw some this summer near Gerlach, Nevada.

262 224 Animals not eaten. -- Coyote (iza·'·^{a}) was hunted with the bow but was not taken in a deadfall. Gidũ·tikad^{ũ} claim not to have eaten the flesh because it tasted badly, but they made use of the pelt. Wolf (i·'·sha) is said by Minnie to have an unpleasant odor. With exceptions of Piudy, all informants agreed that it was never eaten. He claimed that is was hunted with the bow and that the flesh was roasted on the coals.

Informants also denied eating fox (wañi·'·^{i}), dog (soko·puku),[46] lizard (kwida·mugus; kwida·, excrement), frog (waha·tsa), snake (dogo·kw^{a}), and skunk (poñi·tc^{ũ}). They stated that the Achomawi ate coyotes and that tribes to the east ate snakes and dogs. Several declared skunks inedible, but as I obtained an account of its preparation, I presume it was eaten by some; the Burns Paiute are said to have eaten it. Mice (puña·z^{i}) were declared too small to eat. Magpies (kwida·kagai^{i}; kwida·, excrement; kagai^{i} from kai, kai, kai, the bird's call) and eagles (kwiña·'·^{a}) were not eaten.

252 Preparation of animal foods.-- Meat was prepared by stone boiling or by roasting in the pit oven(dũ·avida) or on the coals. It was sometimes pounded or given other sorts of special treatment to be noted below.

Deer flesh was usually boiled in a willow basket. The meat was added when the water was simmering and it was "boiled rare, not like white people boil meat." The Gidũ·tikad^{ũ} did not cook food in a paunch or hide sack, but when a person was traveling in winter and no water was available, he dug a hole and lined it with a deer hide. He then heaped snow on the skin and added hot stones. Such melted snow was called pa'sa·.

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44 This term is said to be onomatopoeic.

45 They are described as black with yellow stripes and as about four inches in length. 46 Two informants had heard of eating dogs in time of great scarcity, but the others vehemently denied it. One gets the impression that dogs were much too scarce to have been of any dietary significance.

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received in powdered form.[86] Joshua listed the fish obtained through trade as kuyu'i (a kind of sucker), a'gai (salmon), yūani, tsia'na, and tsowa'm. 439

Preparation of fish.—Fish were usually cooked in the ashes of the fireplace, although they could be boiled. They were dried on a rack or hung from the boughs of a juniper, but were never placed near the fire to dry as was meat. Usually fish were slit before drying but sometimes not, doubtless depending upon size. As a general thing, fish were not smoked. 251 252

Dried fish were packed in an open-twine tule or sagebrush-bark sack "like those the Modocs use only not as well made." These bags were called mago"o (general word for container) and were possibly four feet in length and two in width. Their size argues considerable quantity. Minnie Anderson said that fish did not keep very long; "they tasted funny." Dried fish were prepared by boiling or by roasting but were not pounded. 251 415

Fish eggs (a'gai noho) were dried and ground.

VEGETABLE FOODS AND THEIR PREPARATION

The Gidū'tikad[8], like other non-agricultural peoples, gathered such seeds, berries, and roots as their habitat offered. All informants stressed the great plenty of these foods in the early days, and their statements are corroborated by those of the first settlers, who maintain that, although now sage-covered, the whole valley was formerly meadowland. Plant specimens are difficult to obtain and on the whole the data are pretty meager. Surprise valley itself yielded little, but a number of specimens were procured on the southern shores of Cowhead lake, a few miles northeast of Fort Bidwell; some were also gathered west of the Warners and a few more near Beatty, Oregon. The seed material is particularly sparse; the list (below) probably includes less than a fourth of the original number. It does appear however, that the most important seed plants are represented. The list of berries and roots is somewhat larger and seems relatively complete. 222 187

Seeds.—In late summer women gathered seeds in a twined conical basket or in a light sack of deer or antelope hide. For ordinary seeds, such as grasses, the woman held the container in her left hand and knocked the seeds into it with the twined beater which she wielded in her right hand. She gathered other seeds, such as those of sunflowers, by pulling the dry blossoms and depositing them in the burden basket. 222 415

[86] Cf. de Angulo, 320.

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Seeds were sometimes mixed with berries but never with meat. Informants had not heard of eating sage seeds. They considered cat-tail (toib[a]) seeds edible, although the root was a more important food. Cat-tail stalks were spread on the ground, fired, and the seeds gathered. These were shelled by being worked lightly on the metate and after this were prepared like other seeds. 252

Identified grass seeds include the following: waha'b[a] (*Hordeum nodosum* L.); sopi'b[a] (*Poa nevadensis* Vasey)[82]; mono'p[a] (*Sitanion hystrix* J. G. Smith), foxtail; waiya' (*Elymus condensatus* Pres.), rye-grass; ——— (*Alopecurus aequalis* Sobol); so'pi' (*Glyceria borealis* (Nash) Batchelder). 137

Pine-nuts (tü'ba) were of minor importance to the Gidü'tikad[a]. Aside from a few nut-bearing piñons near Bidwell mountain, they are quite lacking in the whole territory. Informants knew them from Pyramid lake and several described methods of preparing them. Minnie Anderson said that the cones were beaten from the trees with long sticks and dumped into an earth oven. They were roasted for an hour or so, after which they were removed, picked, and the nuts spread to dry. The latter were then shelled on the metate and winnowed. They were further dried, then ground on the metate, and made into gruel. As the gruel cooked, it was stirred with a willow twig, one end of which was looped back and tied with the outer bark of the twig. Nannie Ochiho gave substantially the same procedure except that the nuts were ground unshelled. According to Joshua they were successively parched, shelled, winnowed, ground, and made into mush. 222 252 415

Fruits and berries.—Chokecherries (*Prunus demissa* Distr.) (do'-icabui) were eaten fresh or dried. Preliminary to drying they were broken lightly with a stone, molded into cakes, and placed in the shade to harden. Such dried cakes were ground to powder on the metate and then boiled. Nowadays dried cherries are mixed with water and flour, possibly with seed meal in the old days. Chokecherries and wa'da seeds were sometimes combined. A beverage was made by pouring hot water on the fruits and a tea was made from chokecherry stems. [272]

Wild plums (tuyu) were gathered in an open-twine burden basket. They were pitted but not crushed and dried in the sun. The dried fruits were "pretty strong" before sugar was available. Wild plums are quite plentiful in the Warners and are still gathered in late summer.

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[82] And probably *Poa gracillima* Vasey as well, for which I have no native term.

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251 Black haw (*Crataegus douglasii* Lindl.) (kwinü'pe) is a berry
252 which was formerly, but is no longer eaten. It was used either fresh or dried. Service berry (*Amelanchier venulosa* Greene) (ti'gabui) was eaten fresh or dried, boiled or uncooked. Such berries were always kept overnight; otherwise they would give one a stomachache. They were crushed before being dried. Daisy said that ground a'gü' seeds were mixed with mashed fresh berries (particularly ti'gabui), or with dried berries which had been soaked, and the compound eaten without further preparation. It was called dümä'iyu (mixture of any sort) or tütza'kiü (also mixture, but applying only to fruits and the like).

Mogu'tsiabui (gooseberry; mogu', thorn), boko'pe (wild currant), and atsa'pui (*Ribes cereum* Dougl.) were eaten fresh and uncooked. Before gathering atsa'pui, a person had always to throw a handful of dust on the bush, otherwise he would surely have a headache. Dust was also thrown on a berry bush to prevent birds from eating the fruits.

Buffalo berry (*Shepherdia argentea* Nutt.) (wi"yüpui) called for special preparation. One might eat the berries fresh, but if a person were going to dry them, he covered them with rye grass to which he set fire. While the grass was burning he stirred the whole well in order to cook the berries. After this preliminary cooking, the fruits were dried. Dried buffalo berries had to be "washed hard" to remove the accumulated charcoal. Afterward they were boiled, drained, and crushed. My informant said that nowadays buffalo berries are mixed with flour and sugar and made into a pudding.

Elderberries (*Sambucus glauca* Nutt.) (hubu') were eaten fresh or dried; they were not cooked before being dried.

272 The Gidü'tikad[84] used to manufacture a beverage from juniper berries (wa"pui). The fruits were picked, broken in the hands, and water added. After a thorough stirring, the pitch rose to the top and was skimmed off with a blade of grass. The beverage was served in individual willow bowls and drunk immediately. Sometimes it was mixed with pounded deer liver to make a "gravy." Juniper berries were never kept any length of time.

#222 *Roots.*—From early spring well into summer root gathering was
252 an economic activity of great importance. Women went each day to dig ya'pa', tu'nu"yu, mu"a', hu"nibui, pa'ni'go'°, and other roots. These they prepared by boiling or by pit-roasting,[84] or sometimes preserved

[84] Spier (Havasupai, 119) is probably mistaken in thinking pit-roasting absent in the Basin. Although Lowie does not mention it in Shoshonean Ethnography, he does report it for the Northern Shoshone (188); for the Gosiute, Chamberlin (337, 339) speaks of it as "the usual method of cooking" certain roots; and among these Paviotso, it is a standard method of food preparation.

1: Kelly E-5 (1930) 1934 Northern Paiute
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by drying in the sun. Nowadays there is little root gathering, one very good reason being that the plants are no longer to be found. In May of 1930, however, a party of older Gidū'tikad[a] women crossed the Warners to Davis creek[a] and there spent several days digging ya'pa'.

The digging stick in use today is a straight iron bar about three feet in length, pointed at one end, the other end turned in a loop or else provided with a wooden cross-piece as a handle. The old digging stick (bodo') was a straight piece of mountain mahogany (tu'pi) sharpened to a point with a stone knife or by being rubbed on a stone and hardened in the fire. Sometimes a limb at right angles made a handle of sorts, but ordinarily the stick was unhandled and the butt bound with buckskin to protect the hand. In digging, the butt rested against the body, one hand on it, and the other part way down the shaft. From demonstrations, the technique was one of pushing rather than of thrusting.

Roots of various members of the parsley family figured prominently in Paviotso diet, particularly ya'pa' (*Carum oreganum* Wats.), commonly known as epos. Quantities of it were gathered from the hills east of Surprise, and from the flats near Bear ranch in the south end of the valley. The roots were rubbed on an open twine tray to divest them of their skins and were subsequently prepared in a variety of ways. They might be eaten immediately, raw or boiled, or else dried in the sun and stored. Dried ya'pa' was boiled and sometimes pounded. Most kinds of dried roots were soaked and eaten without being either pounded or cooked.

Ha'pi'[1] was a root of some importance and was formerly plentiful in the hill country east of Surprise, although today it is difficult to find a single specimen. It is a *Lomatium*, probably *L. canbyi*, a species known from eastern Oregon. The roots were cooked in the earth oven, either fresh or dried. Ha'pi'[1], like ya'pa', was skinned on a basket tray and dried in the sun. Tu'nu''yu (*Lomatium leptocarpum* C. and R.) was also found east of Surprise as well as near Bear ranch and in Fandango valley. The flat west of Bear ranch derived its native name, Tu'nu''yu-kama''s, from this root. Tu'nu''yu was eaten uncooked, either fresh or dried, and when stored, was mixed with ya'pa'. The roots are said to have spoiled if they became damp.

Hu''nibui (*Lomatium macrocarpum* C. and R.) also was eaten either fresh or dried. Charlie Washo thought it could be eaten raw

[a] Achomawi territory.

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Seven or eight mats were required for a lodge. They were wrapped tightly on the frame, overlapping like shingles. Considerable space was left at the top for the smoke to escape; the smoke hole was unnamed; in very cold weather it was covered by a blanket. The doorway was "about the height of a man's eye." At night it was closed by a grass or tule mat or by a deer skin or old blanket fastened outside. Sticks were attached at the top, bottom, and along one edge of the mat to give it body and to enable one to open and close the door (natsakuna) at will. The tule-covered lodge was called sa'i-nobi (saib^{a}, tule; no'bi, house). I was assured that it was a good house—entirely impervious to rain and snow and never smoky. The aboriginal house has been replaced by a frame packing-box structure, but an excellent photograph of old Chief Oehiho's tule-covered lodge may be seen in Kober's Reminiscences.[74]

When grass-covered, the house was called waha'-nobi (from papa'-waha'b^{a}, rye grass). The grass, four or five feet in height, was cut near the ground and twined into mats which were applied to the frame the same as those of tule. Plate 18*b* shows a house somewhat in the manner of the old style. It was occupied until recently, and the exterior was completely swathed in canvas and sacking. At the lower left can be seen the remains of the grass covering held together by strips of cloth in simple twine.

Men erected the framework. Women applied the mats except at the top, where men took charge. The winter house always faced away from the prevailing wind.

The fire was in the center under the smoke hole. The spot was not enclosed by stones, but there might be a depression of a few inches. All cooking and eating was done in the house. Persons slept on the grass-covered ground, their feet toward the fire.

In spring, the winter house was abandoned; occasionally the mats were removed, rolled up, and cached. From spring until the following winter, "a week was about as long as they stayed any one place. Sometimes they built a shade. They either built a shade or just went around under the trees."

Summer structures seem to have been of two principal types, the shade (haba') and the brush enclosure (dü'a-nobi; dü'a, round). The former, illustrated in plate 18*c*, is frequently seen at the present time. It serves as a porch or as a shelter for vehicles, etc., but during warm weather many move from their wooden houses into such shades. The

[74] 1:248.

2: Lowie E-5 (no date) 1924 NR13 Northern Paiute NR13

for the berries and throw them into the baskets. On returning home they spilled the berries out on the ground and dried them, then put them back into the baskets, dug a big pit and put the berries in their containers into the ground, covering up the hole with dirt. In the winter when other supplies were lacking they would take the berries from these caches. Chokecherries were also gathered by the women in the mountains. They were mashed together with the pits. They formed the pounded mass into round lumps, which were allowed to dry, put into small sacks, and stored until the springtime. Another kind of berries, *qurü'ɛs*, was likewise pounded on a stone and cached for the spring.

Among the Paviotso of Pyramid Lake and Fallon the old foodstuffs and apparatus pertaining to them are still very much in evidence (1914). In several settlements I observed women cutting barley with sickles and putting the grain into large conical burden baskets after the fashion of the old seed-gatherers; seeds were extensively eaten, and metates were everywhere noteworthy household articles. Probably most of the seeds were boiled as mush in basketry vessels, but some were eaten unboiled. Generally they were stored in underground caches in the fall. A great number of different seeds were mentioned and samples were produced of several. The method of treatment is somewhat different for different species. My informants mentioned the following vegetable foodstuffs: *t'üsá*, pine-nuts; *tuγú*, an asparagus-like sweetgrass; *ya'pá*, which is found in clayey soil and resembles the sweet potato; *qõgí*, wild carrot; *múɔ*, garlic-like, growing in dry flat country; *ü''üts*, little onions; *ɦsi*; *a'qõ'*; *kusíak'*; *qõγá*, very small black seeds; *wá+i*, sand-grass; *a'tsá*; *tuɦra*; *tubûs*, a huskless valley seed.

Like the other Shoshoneans, the Paviotso gathered pine-nuts in the summer, laying up supplies for the winter. Indeed, they are sometimes called Pine-nut eaters.[1] The nuts are shelled by striking them with the muller (*tusú*), then they are ground into flour with the same implement. The flour is put into a semi-globular basket, diluted with water, and stirred with a stirrer (*bat!ú*) of piñon wood. Then the mixture, containing small particles, is emptied into cups, one cup for each participant of the feast, and drunk. The stirrer is a looped stick of piñon wood like that described and figured by Barrett for the Washo;[2] the green stick is hardened in the fire. In gathering piñon nuts a conical basket called *tũpá-qɔana* or *tũ'ba-γawúnɔ* is used; it was formerly furnished with a thick buckskin carrying-strap. Sam Dick said that both sexes partici-

[1] Cf. Hopkins, 13, 75; Lowie, 208.
[2] Barrett, (b), 16.

2: Lowie E-5 (no date) 1924 NR13 Northern Paiute NR13

pate in these expeditions: the men climbing the trees with the smaller type of conical twined openwork baskets, while the women wait below with the larger type, into which the men throw the nuts. At Lovelocks, Nevada, the constable, Mr. Wolf, as well as the Indian policeman, Frank Rhodes, told me that when the trees are not very high the Paviotso fit a long willow pole with a hook of some other kind of wood and knock down the burrs, thus eliminating the need for climbing. Rhodes said that nowadays the people limit their nutting trips to a period of from one to two weeks, or at most a month, but that formerly they used to go away for a much longer period.

The yellow powder of the *tsimá* flower was drunk with water and seeds.

The *ãʒi* seeds were gathered in September in slues and ground on metates (*wi'kwá*) in the winter. Later in the fall they used to get *wará* seeds, which in flour form are called *wattá*. The *wãī'ⁱ* seeds grow in the mountains on sandy soil and are gathered in July. They are spread on one side of the metate and separated from the black husks, which are discarded. Then the metate is turned over, and the *tusú* muller is used in place of the separator. The stone slab rested on a large basketry tray (*tūmᵉ*) during the work of separation. The tray was moved from one side to another so as to throw out the husks. This kind of meal may be drunk either cold or boiled. The *ats'á* seeds grow in the valley. They are not shelled with the separator, but roasted with live coals in a tray and then put on a metate, ground into flour, put into a round basket, mixed with cold water, stirred and drunk. I had some *ãʒúdz* seeds prepared for me. The metate rested on a *tū'mᵉ* tray. The seeds were rubbed with a sidewise movement into the tray in order to loosen the shells, which were then shaken out of the tray and into another *tū'mᵉ* together with the dust by means of a curious sidewise motion. The metate was reversed, and the seeds placed on it reduced to flour with the *tusú* by a forward and backward motion.

The Wind River Shoshoni said that about August their women used to gather roots, storing them in bags for the winter. Wild carrots were used all the time and are still gathered in the fall. They used a digging-stick of greasewood. Chokecherries and sarvisberries were pounded up and dried, and gooseberries were dried, but neither cherries nor berries were mixed with meat.

The Ute ground and boiled sunflower seeds, which were cached for the winter. Tule seeds were used for food. The *wíc'* root was pounded up and the seeds used as soap for washing.

Washo NT20
Achomawi NS5

NWA 782 796

ANTHROPOLOGICAL RECORDS

	To	Kl	Kd	Hn	To	Ts	Pa	Wa	At	Sa	Tg	Wh	Kl	Kd
398. Game believed immortal	-	+	+	+	-	-	+	°	-	+	-	-	-	-
399. Game increase controlled by ceremony	-	+	-	-	°	+	-	-	-	-	°	+	-	-
401. Offering of game kill	-	-	-	-	°	+	-	-	-	-	°	+	-	-
402. To "nature"	-	-	-	-	+	+	-	-	-	°	°	+	-	+
403. To spirit	-	-	-	-	+	+	-	-	-	+	+	+	-	+
404. With prayer	-	-	-	-	+	+	-	-	-	+	-	-	-	+
405. Piece of gall	-	-	-	-	-	-	°	-	-	+	+	+	-	+
406. Thrown in brush	-	-	-	-	-	-	-	-	-	+	-	-	-	-
409. Tip of deer tail hidden under rock for luck	-	-	-	-	-	+	+	-	+	+	-	+	-	-

NWA 232 252 251

Gathering

410. Acorns (wia)	+	+	+	-	-	+	+	+	-	-	-	-	-	+
411a. In sand pit	-	-	-	-	-	-	-	+	-	-	-	-	-	-
412. Grinding in mortar (pawam)	+	+	+	-	-	+	+	+	-	-	-	-	-	+
414. Boiled mush	+	+	+	-	-	+	+	+	-	-	-	-	-	+

Miscellaneous Plants

433. "Grass" seeds	+	+	+	+	+	+	+	+	+	+	+	+	+	+
434. Cactus fruit eaten (nuvu or mutse)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
435. "Stems" eaten	-	+	-	+	+	+	+	+	-	-	-	-	-	-
436. Needles burnt off	-	+	-	+	+	+	+	+	-	+	-	-	-	-
437. Needles brushed off	-	-	-	+	+	+	+	+	-	+	-	-	-	-
438. Roasted in ashes	-	-	-	-	-	-	-	-	-	-	-	-	-	-
439. Roots	-	+	-	+	+	+	+	+	-	+	-	-	-	-
440. Berries	+	+	+	+	+	+	+	+	+	+	+	+	+	+

443. Pinon Nuts (tuva)	+	+	+	+	+	+	+	+	-	+	-	°	+	°
443a. Hooked pole (tsamm) for pinon nuts	+	+	+	+	+	+	+	+	-	+	-	-	-	-
445. Nut fire burnt	-	-	-	-	-	-	-	+	-	-	-	-	-	-
446. Nut separate pieces	+	+	+	+	+	+	+	+	-	+	-	-	-	-
447. Climb tree to gather	+	+	+	+	+	+	+	+	-	+	-	-	-	-
448. Men	+	+	+	+	+	+	+	+	-	+	-	-	+	-
449. Women	+	+	+	+	+	+	+	+	-	+	-	-	+	-
450. Climbing stick used	+	+	+	+	+	+	+	+	-	+	-	-	+	-
451. Storage: green, in stone-lined, circular pit	+	+	-	-	-	-	-	+	-	+	-	-	+	-
451a. Piled on ground, covered	-	-	-	-	+	+	+	+	-	+	-	-	-	-
452. Whole cones in cache	+	+	-	+	+	+	+	+	-	+	-	-	-	-
453. Cooked seeds stored	-	-	+	-	-	-	+	-	-	-	-	-	-	-
453a. Cones opened by roasting in earth oven	+	+	+	+	+	+	+	+	-	+	-	-	+	+
454. By burning	+	+	-	-	-	-	-	+	-	+	-	-	+	+
454a. By exposing to sun	+	+	+	+	+	+	+	+	-	+	-	-	+	+
455. Nuts struck from ripe cone	+	+	+	+	+	+	+	+	-	+	-	-	+	+
456. Cache for nuts removed from cone	+	+	+	+	+	+	+	+	-	+	-	-	+	+
457. Unlined pit	+	+	+	+	-	+	+	+	-	+	-	-	+	-
458. Grass lined	+	-	-	+	-	-	+	+	-	+	-	-	+	-
459. Lined with pine-leaf soil	+	-	+	+	-	-	+	+	-	+	-	-	+	-
460. Brush-and-stone covered	+	+	+	+	-	-	+	+	-	+	-	-	+	-
461. Juniper-bark lined	+	+	+	+	-	-	+	+	-	+	-	-	+	-
462. Nuts ground on metate (mota)	+	+	+	+	+	+	+	+	-	+	-	-	+	+
462a. In mortar	+	+	+	+	+	+	+	+	-	+	-	-	+	+
463. Parching	+	+	+	+	+	+	+	+	-	+	-	-	+	-
464. In "fan" (twined basket)	+	+	+	+	+	+	+	+	-	+	-	-	+	+
466. Conical burden basket for gathering	+	+	+	+	+	+	+	+	-	+	-	-	+	+
467. Family owned plots	+	+	+	+	+	+	+	+	-	+	-	-	+	+
467a. Band owned plots	+	+	+	+	+	+	+	+	-	+	-	-	+	+
467b. Families wintered on pinon-nut range	+	+	+	+	+	+	+	+	-	+	-	-	+	+
468. Nuts eaten as flour, raw	-	+	+	+	+	+	+	+	-	+	-	-	+	-
469. Nuts eaten as mush	+	+	+	+	+	+	+	+	-	+	-	-	+	+
470. Nuts eaten chilled as mush	+	+	+	+	+	+	+	+	-	+	-	-	+	+

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	To	KJ	KP	Ka	Yo	To	Pa	Wa	At	Sa	Yg	Wi	Ki	AT	
Miscellaneous Plant Foods															
*471. "Cane" or reed sugar (pihavi)	-	+	+	+	+	°	°	-	°	-	-	+	+	-	262
471a. Obtained from neighboring area	+	-	-	-	-	+	+	-	+	°	-	+	+	-	222
472. Boiled	-	-	-	-	-	-	-	-	-	-	-	+	+	-	251
473. Dried and beaten	+	+	+	+	+	-	+	-	-	-	-	+	+	-	252
475. Willow-sap sugar	-	-	-	+	-	-	+	-	-	-	-	+	+	-	
476. White pine pitch as sugar	-	+	+	-	-	+	+	-	-	-	-	+	+	-	
477. Pinon pitch as sugar	+	+	+	+	+	+	+	-	+	-	-	+	+	-	
478. Chewing gum	+	+	+	+	+	+	+	-	+	+	+	+	+	-	
479. From plant root	+	+	+	+	+	+	+	-	+	+	+	+	+	-	
480. Rabbit-brush root	+	+	+	-	+	+	+	-	+	+	+	+	+	-	
481. Rabbit-brush bark	+	-	+	-	-	+	+	-	+	+	-	+	+	-	
482. Pitch	-	-	-	-	+	+	+	-	-	-	-	-	-	-	
482a. Berries dried	+	+	+	+	+	+	+	+	+	+	+	+	+	-	
482b. Roots dried and stored	+	+	+	+	+	+	-	-	+	+	+	+	+	-	
Other Plants and Seeds Used															
*482. Yellow cress (atsa)	+	+	+	+	+	+	+	+	+	+	+	+	+	-	
*482a. Sunflower (ahöpi)	+	+	+	+	+	+	+	+	+	+	+	+	+	-	
*482b. Sunflower (pasö)	+	+	+	+	+	+	+	+	+	+	+	+	+	-	
*482c. Sunflower (ahö)	+	+	+	+	+	+	+	+	+	+	+	+	+	-	
482d. Sunflower (kwaiaku)	+	+	+	+	-	-	-	+	+	+	+	+	+	-	
482e. Sunflower (kwaipasö)	+	-	-	-	-	-	-	+	+	+	+	+	+	-	
*482f. Pickleweed (kuhaw)	-	-	-	-	-	+	-	+	+	+	+	+	+	-	
*482g. Sego lily or painted cup (tapavagi)	+	+	+	-	-	-	-	+	+	-	+	-	+	-	
*482h. Sego lily or painted cup (sanaku)	-	+	+	-	-	+	-	+	+	-	+	+	+	-	
*482i. Saltbrush (ahöt)	+	+	+	+	+	+	+	+	+	+	+	+	+	-	
*482j. Rabbit brush (tavisigup)	-	+	-	-	-	-	-	+	-	-	+	+	+	-	
*482k. Rabbit brush (sigup)	+	+	+	+	+	+	+	+	+	+	+	+	+	-	
*482kk. Rabbit brush (angodökupi)	-	+	+	-	-	+	-	+	-	-	-	+	+	-	
*482m. Dogbane (milkweed) (wihavi)	+	+	+	+	+	+	+	+	+	+	+	+	+	-	
*482n. Reed grass (wai)	+	+	+	+	+	+	+	+	+	+	+	-	+	-	
*482o. Blazing-star (kuha)	+	+	+	+	+	+	+	+	+	+	+	+	+	-	
*482p. Wild tobacco (paivuna)	+	+	+	+	+	+	+	+	+	+	+	+	+	-	
*482q. Sorrel (atsa) pasia	+	+	+	+	+	+	+	+	-	+	+	+	+	-	
*482r. Bulrush or tule (siawa)	+	+	+	+	+	+	+	+	+	+	+	+	+	-	
*482s. Cattail (toa)	+	-	+	+	+	+	-	+	+	+	+	+	+	-	
*482t. Spike rush (punnaiwa)	-	+	+	-	-	+	-	+	+	+	+	+	+	-	
*482u. Bulrush or tule (avi)	+	+	+	+	+	+	-	+	+	+	+	-	+	-	
*482v. Sagebrush (sonawa)	-	-	-	+	+	+	+	+	+	+	+	+	+	-	
*482w. Saltbrush (unaiu)	-	-	-	+	+	+	+	-	-	-	-	+	+	-	
*482x. wasai	-	-	-	-	+	+	+	-	-	-	-	+	+	-	
*482y. wunnaigi	-	-	-	-	-	+	+	-	-	-	-	+	+	-	
*482z. hiavi	-	-	+	+	+	+	+	-	-	-	-	+	+	-	
484. Jointfir (tsuhapi)	-	-	-	+	+	+	+	-	-	-	-	+	+	-	
*484a. saiagava	-	-	-	-	-	+	+	-	-	-	-	+	+	-	
*484b. Indian balsam (tsaa)	+	+	+	+	+	+	+	°	°	+	+	+	+	-	
*484c. wata	+	+	+	+	-	-	-	°	°	+	+	+	+	-	
*484d. wada	+	+	+	+	+	+	+	°	-	+	+	+	+	-	
*484e. yupö	+	-	+	+	+	+	+	+	+	+	+	+	+	-	
484f. tsupagi	+	+	+	-	-	-	-	-	-	-	-	-	-	-	
*484g. tuvaa	+	+	+	-	-	+	-	-	-	-	-	+	+	-	
*484h. tsuwai	+	+	+	+	+	+	+	-	-	-	-	+	+	-	
484i. Indian potatoes (sunaa?) (saga or kaga)	+	+	+	+	+	+	+	+	+	+	+	+	+	-	
484j. Indian potatoes (apatö)	-	-	-	-	-	-	-	-	-	-	-	+	+	-	
Gathering Implements															
*485. Digging stick (pöva)	+	+	+	+	+	+	+	+	+	+	+	+	+	°	
485. Point one end	+	+	+	+	+	+	+	+	+	+	+	+	+	-	222

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ANTHROPOLOGICAL RECORDS

	Ts	Kl	K2	Hu	To	To	Pa	Wa	At	Sa	Tg	Wd	Ki	AR
N W A 222														
487. Spatulate end	-	-	-	-	-	+	-	-	-	-	+	-	-	-
488a. Point both ends	+	-	-	-	-	+	-	-	-	-	-	-	-	-
489. Of mt. mahogany (tupi)	+	+	+	-	+	+	+	+	+	+	+	+	+	+
490. Of serviceberry (tuawai)	-	-	+	-	-	-	-	-	+	-	+	+	+	-
491. Of greasewood (tonovi)	-	-	+	-	+	-	+	-	+	+	+	-	-	-
492. Conical seed basket (tūwayuono)	+	+	+	+	+	+	+	+	+	-	+	+	+	+
493. Basketry seed beater (tsiku)	+	+	+	+	+	+	+	+	+	+	+	+	+	+
495. Stiff edged	+	+	+	+	+	+	+	+	+	+	+	+	+	+
499. Seed knife ("sickle")	+	+	+	+	+	+	+	+	+	+	+	-	-	-
500. Woodes	-	-	-	-	-	-	+	-	-	-	-	-	-	-
501. Skin bone	-	-	-	-	-	+	-	+	-	-	-	-	-	-
501a. Stone	+	+	+	+	+	-	-	-	+	+	-	+	-	-
Agriculture														
Wild Seeds														
N W A 241														
508. Wild seeds irrigated	-	-	-	-	-	-	-	-	-	-	-	-	-	-
509. Burning for tobacco	+	+	+	+	+	-	+	+	+	+	-	+	+	+
510. Burning for wild seeds	-	+	+	+	-	-	-	-	+	+	-	-	+	+
Seed Storage														
N W A 251														
521. Storage in pit	+	+	+	+	+	+	+	+	+	+	+	+	+	+
522. Bark or grass lined	+	+	+	+	+	+	-	+	+	+	+	+	+	+
523. Storage in basket	-	-	+	-	-	-	+	+	-	-	-	+	-	+
525. Storage in bark bag (kwisi)	-	-	+	+	+	+	-	-	+	-	+	+	+	+
526. Storage in buckskin bag	-	+	+	+	+	+	-	+	-	-	+	+	+	-
527. Storage in cave	-	-	+	-	-	-	-	-	-	-	-	+	-	-
528. Storage in rock cranny	-	-	+	-	-	-	-	-	-	-	-	+	-	-
Food Preparation														
N W A 317														
529. Salt from: playa	+	+	+	-	-	+	+	+	-	-	-	-	-	-
530. Mineral from rocks	-	+	+	-	-	-	-	-	-	-	-	-	-	-
530a. Trade from south	+	+	+	-	-	-	-	-	-	-	-	-	-	-
532. Small mammals roasted, eaten whole	+	+	+	+	+	+	+	+	+	+	+	+	+	+
533. Roasted, entrails removed	-	+	+	+	+	+	+	+	+	+	+	+	+	+
534. Roasted, entrails boiled, eaten	-	+	-	+	+	-	-	-	-	-	-	-	+	+
536. Meat: dried on coals	-	-	-	+	-	-	-	+	-	-	+	+	-	-
536. Dried on frame in sun	+	+	+	+	+	+	+	+	+	+	+	+	+	+
537. Dried in trees	+	+	+	+	+	+	+	+	+	+	+	+	+	+
538. Smoked	-	-	-	-	-	-	-	-	-	-	-	-	-	-
539. In house	-	-	-	-	-	-	-	-	-	-	-	-	-	-
540. Pulverized	-	+	+	-	-	+	+	-	+	+	+	+	-	-
541. Mixed with seeds	-	+	+	-	-	-	+	-	-	+	-	-	-	-
542. Mixed with berries	-	+	-	-	-	-	-	-	-	+	-	-	-	-
543. Mixed with fat	-	+	-	-	-	+	-	+	-	+	+	+	-	-
544. Stored in sage bags	+	+	-	-	-	-	+	-	-	-	-	-	-	-
545. Tripe eaten	+	+	+	+	+	+	+	+	+	+	+	+	+	+
546. Blood cooked in pouch, gut	+	-	+	+	+	-	+	+	+	-	+	+	+	+
547. Fish	+	+	+	+	+	+	+	+	+	+	+	+	+	+
548. Dried in shade, not sun	+	+	+	+	+	+	+	+	+	+	+	+	+	+
550. Smoked in sweat house	-	-	-	-	-	-	-	-	-	-	+	-	-	-
551a. Spawn (eggs) dried with seed	-	+	+	+	+	+	+	+	-	+	+	+	+	-
552. Pulverized	-	+	-	-	-	-	-	-	-	+	-	-	-	-
553. Bone: cooked bone ground	-	+	+	-	-	-	-	-	+	-	+	-	-	-
553a. Only fish bones ground	-	+	+	-	-	-	+	-	-	-	-	-	-	-
554. Ground bone cooked	-	-	-	-	-	+	+	-	-	-	-	+	+	-
555. Vertebrae ground	-	-	-	-	-	+	+	-	+	-	+	+	+	-
556. Joints ground	-	-	-	-	-	-	+	-	-	-	+	+	+	-
557. Entire bones: marrow extracted	+	+	+	+	+	+	+	-	+	+	+	+	+	+

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Birds Eaten or Used

262 825 [134] 299. Ts: The bird list was obtained by showing bird pictures to ND, Tasiget informant, and recording the Paiute names for birds he recognized. Both English and Paiute names were used in questioning subsequent informants. "Red Book," "Blue Book," and "Green Book of Birds of America," by Frank G. Ashbrook (1931, Whitman Publishing Co., Racine, Wisconsin), were used for these identifications.

308. Identification: Corvus corax sinuatis.

309. Identification: Corvus brachyrhynchos brachyrhynchos.

313. Identification: Buteo borealis borealis.

331. tavavonikudik ("one who looks at the sun").

Insect Food

● 222 337. To: Caterpillars were obtained from Mono Lake Indians. Owens Valley: Piüga (Coloradia pandora Blake) were caught in trenches, baked in earth ovens or openwork baskets (Steward, 256). Although my informants described use of trenches by the Owens Valley Indians, they denied using them themselves.

262 825 114 222 338. Steward, 256, credits Aldrich with saying "koo'-tsabe [Ephydra hians Say.] .... occurred in Walker lake, ... Pyramid lake, and Soda lake, near Carson, Nevada, where they served as food," as well as at Mono Lake. Kuyui and Toe informants denied using these pupae, but the Pakwi informant said his people got them from Pyramid and Soda lakes. Leonard's statement (p. 118; also cited by Steward) that flies were collected from "the lakes" has been mistakenly attributed to Humboldt Lake. The Kupa denied use of kutsavi. Leonard's account cannot be relied upon because of its inconsistencies and indefinite localization. His editors assumed it took from Sept. 4 to Oct. 10 to go from Humboldt to Carson lakes. Since Leonard mentions going directly from "these Lakes" to the Sierras, and since the Indian trail followed led through Walker Pass, I am convinced that Leonard described the taking of "flies" and use of pottery of the Mono and Owens Valley Indians. Leonard's ethnology must be accepted only after careful study and allowance for the fact that he wrote for popular interest largely from memory because "part of his narrative was stolen from him by hostile Indians" (Preface, 24). Walker's journal, to which he was supposed to have had access, has never been published nor is it known to have existed. Kl: DG knew that kutsavi once occurred in a little slough on the south edge of Pyramid Lake, but they were never obtained there for food, so far as he knew. He knew the Mono Indians ate kutsavi. "Kuzavi (larvae) .... were taken in fair quantities at Pyramid and at certain other salt lakes of central Nevada" (Curtis, 15:75). To: Some old-timers went from Stillwater to Mono Lake to get

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N 262 825 114 222 kutsavi. There were none in Carson Lake. The Toe did not use the larvae said to occur in Soda Lake near Fallon. It was not important to them. Tō: Larvae kutsavi were obtained from Mono Lake by trade or expedition. Maggie and Goggles wondered why the Toe did not use the kutsavi which occur in Soda Lake, between Fallon and Hazen, Nevada. Pa: DW said he knew that kutsavi was obtained in old days from Mono Lake primarily, but also from Soda Lake and from a small slough near Pyramid Lake. Wa: Larvae were obtained from Mono. At: In the old days kutsavi larvae were found in the sloughs of Quinn River near Sod House. In the same place a green marble-like water plant was found, called ica pui ("wolf eyes").

W [222 825]

342. Tō: Ant "eggs" were used as medicine.

344. To: Informants said cicadas (kūa) did not occur near Stillwater.

348. At, Sa, Tg, Wd, and Ki: Informants pronounced the word miju, the other Paiute bands said niju.

A [222 25] 356. AE: Grasshoppers were caught by encircling with fire to drive them together and roast.

358. AE: Grasshoppers stored in woven vegetable-fiber sack.

A [262] 360. Wd, Ki, and AE: Only antelope liver eaten raw.

W [262] 361. Wa: - (Smith, notes).

362. Tō: Deer heart and kidney only of his first deer was taboo as food to a youth lest become lazy. At: Deer heart was taboo to women and young men. A boy would be short-winded if he ate deer heart. Tg: Heart meat made all people lazy. Wd: - (SC).

364. Tg, Ki: Young people were allowed to eat cooked liver. Wd: - (SC).

365, 368. Wd: - (SC).

W [262] 367. Wa: - (Smith, notes).

368. Wd: - (SC).

N 796 262 369. Ts: Not only the first kill, but any game shot with bow (or gun) was taboo to a youth until performance of a ceremony. Neither father nor mother were allowed his first game, but the youth's brothers and sisters would eat it. This taboo did not apply to game trapped or clubbed. ND said he never ate his own kill until he was nearly 25 years old. At that time, an old Indian, not a shaman, suggested to ND's parents that the boy was old enough to eat his own game. ND then killed a deer which he carried to camp where it was cut up. ND was smoked over a small fire of sagebrush, and then a willow hoop, wrapped with strips of meat from the game he had just killed, was prepared and he stepped through it 5 times. Next a small piece of meat was cut from either the right or left side just behind the front legs of the deer and roasted, and then handed to ND to eat. "I was afraid. I had never eaten meat that I had killed. The old man told me to go ahead and eat; said it wouldn't hurt me. I thought I would be sick, but I took the meat inside me. It almost came up again, but I tried hard and kept it down.

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areas where it was said not to occur. Nowhere is it common.

443. Wd: EJ said he had heard that Kuyui brought piñon nuts to Burns in the old days to trade. I think the distance would prohibit such a thing before the horse was introduced. AE: Piñon nuts were obtained on the Saddle Back, W of Eagle Peak. The piñon nuts, small but good, were not important as food.

443a, 446. Owens Valley: + (Steward, 241).

451, 453a, 458, 462, 464. Owens Valley: + (Steward, 242).

466. Owens Valley: Conical baskets and buckskin bags used to transport piñon nuts (Steward, 242).

467. Owens Valley: + (Steward, 242). Although among several of the bands there was said to have been family ownership of plots, among none of these was it true ownership. One family might claim a plot, but anyone who wished would get nuts there. No mention was made of quarrels or stone throwing resulting from trespass, as was recorded by Steward, 241, for Owens Valley.

467a. As with family ownership, so with band ownership. Each band claimed a certain area because it usually went there for piñon nuts; however, it went elsewhere, often to an area claimed by another band, in event of crop failure. Owens Valley: + (Steward, 241).

468-470. Owens Valley: + (Steward, 242).

470. Chilled mush is assumed to be flour made of roasted piñon nuts mixed with cold water and eaten without additional cooking. Mush is made the same except the flour and water are heated.

Miscellaneous Plant Foods

471. N. Paiute: "Cane" sugar was obtained at Carson and Humboldt sinks in same manner as described by Steward, 245. TS: The seeds of the tövusi were so sweet that sugar was not important. Pa: The Agai and Pakwi went to Carson Lake for cane sugar. At: The Atsa traded buckskin, moccasins, Indian potatoes for cane sugar from Stillwater (Toe). Old trail from McDermitt to Humboldt ran just W of Santa Rosa mts.

471a. Sa: "Cane" sugar from Lovelock.

478-479. Wa: + (Smith, notes).

Other Plants and Seeds Used

Specimens of about 60 plants, most of which were used by the Indians, were pressed in the field and were presented to the U. C. Herbarium. I am indebted to Dr. Herbert L. Mason for identifications, unless otherwise noted.

483. Identification: Radicula curvisiliqua Hook., Cruciferae family (Steward, 242). Sisymbrium sophia, S. incisum Engelm., or S. pinnatum Green (Kelly, 98). Mason identified specimen from Reno as a Crucifera. This suggests that different genera of Cruciferae may have been designated by the same native term.

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● 242
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483a. Identification: Wyethia mollis Gray.
483b. Identification: Helianthus annuus L.
483c. Identification: Wyethia ovata T. and G. (Steward, 242). akö seeds used.
483f. Identification: Allenrolfea occidentalis Roem. kuhava seeds used. Habitat, extremely alkaline or salty places.
483g. Identification: Castilleia confusa Greene. taparogi bulb used. Habitat, protected dry spots of canyons or mountain sides.

[261] 483h. Identification: Eriogonum baileyi Wats. sanakö chewed as gum. Habitat, desert.

[317] 483i. Identification: Atriplex. Sünü seeds eaten; were probably an important source of salt, although only one informant, PS, mentioned this fact. Habitat, sandy spots near salt or alkali-encrusted deserts; near playa.

[278] 483j. Identification: Tetradymia glabrata Gray. Kl: DG said this plant furnished an arrow poison from its bark. Habitat, dry desert.

[261] 483k. Identification: Chrysothamnus nauseosus Britton. At the top of the roots of sigup, Indian girls and women found small lumps of some secretion. These were collected and chewed as we chew gum. Habitat, favored desert areas.

[278] 483kk. Identification: Parosela polyadenia Heller. mogodöhupi used as medicine. Habitat, favored desert spots.

[283] 483m. Identification: Apocynum cannabinum L. wihowi bark made into excellent fibers for rope, string, etc. Habitat, moist rich soil of river bottoms.
483n. Identification: Oryzopsis hymenoides Ricker. wai seeds used. Habitat, dry sandy hills.
483o. Identification: Mentzelia albicaulis Dougl. kuha seeds used. Habitat, sand hills.

[276] 483p. Identification: Nicotiana attenuata Torr. Owens Valley: + (Steward, 319).
483q. Identification: Rumex crispus L. pawia was considered native to Stillwater by LP, who said its seeds were eaten; PS said roots were used for medicine. Tidestrom, of U.S. Herbarium, in Flora of Utah and Nevada, said it (Rumex crispus L.) was introduced from Europe. Habitat, moist stream banks.
483r. Identification: Scirpus acutus Muhl. siavö furnished food in the form of seeds and root stock, also material for houses, cordage, footgear, and weaving. It was one of the most useful plants of the Northern Paiute.
483s. Identification: Typha latifolia L. toe roots eaten. The Indians around Stillwater were called Toe-dökado ("cattail or tule eaters") because they had little else to eat at certain seasons. When other food was abundant, toe was not eaten.

[286] 483t. Identification: Eleocharis palustris Roem. pamusivö used for weaving, bags, etc.
483u. Identification: Scirpus americanus Pers. avi, same uses as 483r.

[278] 483v. Identification: Artemisia tridentata

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N 137 222 262 [278] Nutt. sawava leaves used as tea for colds, etc. My informants insisted this was in pre-white days.

483w. Identification: Atriplex argentea Nutt. umaka seeds used. Habitat, favored desert conditions, good soil needed. DW, a Pakwi, called the same plant sunu.

483x. Identification: Chaetadelpha wheeleri Gray. masai, an Indian lettuce, green vegetable food. Habitat, only favored spots where soil is good.

483y. Identification: Glypotpleura marginata Eat. commösigi eaten as greens. Specimen furnished by Miss Beyers, Indian Service teacher, from a collection made by her Indian students at Schurz.

483z. Identification: Hermidium alipes Wats. hiwovi used as medicine. Specimen from Miss Beyers; see note 483y.

484. Identification: Ephedra torreyana Wats. tsudupi tea for medicine; powder to use as salve.

N [278] 484a. Identification: Psathyrotes annua Gray. saiagava, emetic and physic. DW: "If one doesn't vomit he dies." Habitat, desert.

N W [278 226] 484b. Identification: Leptotaenia multifida Nutt. toza used for fish poison; smoked and chewed by Indians to cure a cold. Habitat, shady places on hillsides. Wa: The same word, toza, in both Paiute and Washo languages designates the root of Indian balsam. At: PS was first to mention use of toza as fish poison. He also mentioned rye grass (Elymus condensatus Presl.), watca wotavö, for house building.

484c. Identification: Chenopodium album L., from Steward, 1933, and Kelly, 1932.

W [362] 484d. Identification: Suaeda depressa var. erecta Wats., from Kelly, 98. wada seeds eaten. Wa, At: wada absent from Washo and Atsa areas.

484h. tövusi, nut grass. Habitat, meadows or stream banks. Steward, 245: "probably Brodiaea capitata Benth."; Mark Kerr of Independence, California, had "Taboose" identified at the University as Cyperus rotundus L., according to Frank Essene, Ms.

A [222] 485. AE: A crosspiece was placed on end of digging stick to serve as handle. Paiute name of digging stick is pörö.

N [249] 505. Owens Valley: + (Steward, 247).

509. Owens Valley: Tobacco yield was increased by burning, pruning, and irrigating (Steward, 319). Tg: The Tagö knew that tobacco grew better in burnt-over places, but they did not set the fires. Wa: - (Smith, notes).

N [342] 527. Wd: BJ said there were no caves near Burns, Oregon, but there were many of them on Juniper Mountain. These caves were thought to

N [744] have been inhabited during winter months, also used for burials. BJ had seen the caves, had never seen anyone living in them, yet remembered "old-timers" telling of the caves as habitations.

N [317] 529. Seven bands absolutely denied aboriginal use of any salt. Only PS of McDermitt even mentioned any salt from plants. Tö: The Tövusi went

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5: Park E-5 (1935) 1934
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PAVIOTSO SHAMANISM

By WILLARD Z. PARK

INTRODUCTION

THE information for the present paper was collected in the course of a field trip to the Nevada Paviotso in the summer of 1933. The reservations at Pyramid lake and Walker lake were visited as well as the Paviotso settlements at Reno, Fallon, and Yerington.

In pre-Columbian days the Paviotso occupied almost the entire northwestern part of Nevada. A closely affiliated band was in Long valley and Honey Lake valley of California. This band ranged from the eastern shores of Honey lake to Pyramid lake in Nevada. Today many of them live on the reservation at Pyramid lake or in the Indian colony at Reno.

Before their confinement to the reservations, the Paviotso or Northern Paiute lived a semi-nomadic life. Fishing in Walker lake and Pyramid lake and the taking of fish from the Truckee and Walker rivers during the spawning season provided an important share of their diet. In the spring and summer the women ranged over the semi-arid hills and valleys of their habitat, gathering wild seeds and roots while the men hunted deer, antelope, rabbits and other game, or fished. In the fall the entire population moved up into the mountains for the pinenut harvest. When winter set in they settled on the shores of the lakes and along the river banks. It was during this season that the Paviotso were most sedentary. The women stayed in camp and the men hunted not more than a days journey from their winter quarters. Throughout most of the year these people ranged over the country in small groups of one or two families. They came together in large bands only for communal undertakings such as the rabbit or antelope drive or a concentrated attack on their traditional enemies, the Pitt river Indians. The big festival dances held in the spring and fall and religious dances held at the call of a messiah of the Ghost dance movements would also bring large numbers together for a short time. Shamanistic treatment of the sick would attract all the people from camps within an easy journey to the sick man's house.

Many of the old religious beliefs and practices flourish today among the Paviotso in Nevada. Shamans continue to treat the sick and those suffering from gunshot wounds. Murders motivated by a suspicion of witchcraft have occurred within the last few years. There is a feeling among most of the Paviotso, however, that shamans are no longer as powerful as they were in the old days. Many informants expressed a strong opinion that Jack Wilson, or Wovoka, the messiah of the 1890 Ghost dance movement, was the last powerful shaman. The failure of the shaman's powers

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787 night "Doctor Dick" went into a trance. In the morning he went with the man and 756 showed him where the money was buried.

Several informants stated that the coming of the white man in Paviotso country was foretold by shamans. The following story was related by Nick Dowington, a Paviotso, now about eighty years old.

[200] There was a shaman at Pyramid lake called Toiyap. The People were in the hills west of the lake, gathering seeds. Toiyap felt something coming to him. He was singing loudly. He told his brother-in-law to get all the people together. They built a big bonfire. Then he went into a trance and lay by the fire. When he came out of the trance he told them what he had seen. He said that people were coming who had white skins and hair on their faces. He said these people had white mountain sheep with big ears. He meant horses[?]. He told them these people were coming. This happened thirty years [?] before any white people came here.

WITCHCRAFT

756 Poisoning by shamans who practice witchcraft is considered by the 754 Paviotso to be a common source of illness. Usually the shaman simply wishes, or dreams that someone will be ill and his power then causes the sickness. Some of the Paviotso believe that a witchdoctor gets his power [825] from the bear.

Sometimes a sick man dreams that a person who looks like a bear comes to him. Then he knows that a shaman with power from a bear poisoned him. This is the strongest power. Even a good doctor cannot cure him.

754 A bad shaman wishes sickness on people. He thinks about it and the person gets sick. He might wish a lizard or snake to go into someone and that causes sickness. He does not catch a lizard to use in poisoning people. He only thinks about it and [755] then it comes true. A good shaman can suck out the lizard and then the patient gets well.

Sometimes shamans try to poison each other. That is why so many doctors have died. The weaker doctors were all killed by shamans with stronger power.

Another way to make a person sick was for the shaman to give his victim food. When a bad shaman wants the person to be sick he wishes it when he gives the food. Then the one who eats gets sick and dies. Sometimes a bad shaman will touch someone and wish for sickness. Then that person will get sick right away.

Cast-off clothing, nail parings, hair and other personal objects are never used in witchcraft.

754 Sickness resulting from witchcraft is treated in the same way as other 755 illness. A shaman is called and he learns from his power, not only how to 683 treat the patient, but also who caused the illness. then the family of the patient revenge themselves on the shaman who practiced witchcraft. If

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Eleven years after Work had been at Abert Lake John C. Frémont discovered Summer Lake, which Frémont named. Frémont and his party traveled south along the west shore of Summer Lake, following a well-beaten Indian trail which led to Chewaucan River and Chewaucan Marsh. At the marsh the ground appeared as though it had been ploughed; Frémont concluded that Indians had been digging tubers, but what these were he could not discover.[112] In the vicinity of the marsh Frémont also found "frequent trails, and fresh tracks of Indians," but encountered no natives.[113] From Chewaucan Marsh Frémont went eastward to Abert Lake, which he also named. On the eastern, or Abert Rim side of the lake Frémont found a well beaten Indian trail, which he followed southward,[114] but again he met no Indians. It was not until he was well out of the Summer-Abert lakes region and south of the 42nd parallel that he actually encountered "some Snake Indians"; by accident, members of his party almost rode over two huts of Snakes, in Long or Surprise valleys, early in January, 1844.[115]

From 1845 onward the Silver-Summer lakes region may have been visited in its northern half by loosely organized companies of Oregon pioneers in search of the "Blue Bucket Diggings," but of such parties we know little, except that their members were often attacked by "Indians."[116] "Some morning about daylight, twenty or thirty red blanketed men, with hideous yells would attack the sleeping men. Then would result a stampede....The few cool heads would make a stand, while the savages after getting away with the horses, would beat a retreat, leaving the gold hunters to straggle afoot back across the mountains [Cascades] to the [Willamette Valley] settlements."[117] Such attacks, however, seem to have been mostly north of the Silver-Summer lakes region.

In 1853 "the lost wagon train of 1853" went south of the lakes (Malheur and Harney lakes, or Silver and Summer lakes?) instead of north of them, trying to reach the Willamette Valley, and had "a very hard time of it."[118] In that same year, as we have already noted, Superintendent Joel Palmer sent Indian Agent J. M. Garrison to visit the Indians between the headwaters of the Willamette and Fort Boise, but Garrison failed in this mission.[119] The next year Capt. Jesse Walker, commanding a company of California volunteer militia, campaigned in Surprise

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and raised at Lakeview, Ore., at the head of Goose Lake, testified that the Paiute he was descended from not only hunted on the western slopes of the Warners around Goose Lake, but also hunted even farther west, in Drew's Valley and around Dog Lake. In a little valley which John did not know an English name for, some eight miles west of Lakeview, the Paiute obtained camas and other tubers, wild plums, wild onions, ground-hogs and deer. John had also heard of Paiutes utilizing the Chewaucan River-Summer-Abert lakes country for waterfowl at Chewaucan in the marsh, deer around Summer Lake, and ducks and deer and field rabbits at Abert Lake. Of Silver Lake and its food resources he said, "I don't know much about it," indicating that it was outside the range of his people (Reno Transcript, pp. 173-182, 184-185).

49. For early references to Northern Paiute in Surprise and Warner valleys see Elliott, Ogden Journals, vol. II, p. 220; Frémont, Report, p. 212; Delano, Across the Plains, p. 89; Reed and Gaines, Gold Rush, vol. I, pp. 310, 577-578 and fns., pp. 624-627 and fns.; Williamson, Report of Reconnaissance made in 1849, pp. 20-21; Abbot, Report, p. 27; Drew, Official Report, p. 10; NA, BIA. OS. Letters Received 1869. H-18 (Huntington's detailed account of his 1868 visit to eastern Oregon, with remarks on Capt. Warner's death at Warner Lake in 1849); Indian Affairs on the Pacific, p. 28; Protection Afforded, pp. 12-14 (a notable account of Hot Spring [Surprise] and Pi-ute [Warner] valleys and the Indians encountered there, in 1854, by Capt. Jesse Walker); Drew, ibid., pp. 9-15, 24 (also an excellent account, for 1864); Gatschet, Klamath Indians, pt., I, 28ff.; RSW 1867 [CDS #1327] p. 69 (Maj. Gen. George Crook's report on Surprise and Warner valleys). For accounts of the Surprise Valley Paiute from 1870-1877 when they were intermittently on the Klamath Reservation see fns. for 3. 2; for a recent account of them see Kelly, Surprise Valley Paiute.

50. The Army officer was Gen. Benjamin Alvord, commanding the Department of the Columbia. In April, 1864, Alvord wrote to Col. R. F. Maury, commanding at Fort Dalles, Ore., "Any feasible and practical scheme of getting the Snakes under our control will command instant attention...They are a roving, nomadic race... a tribe hard to tame, not accustomed to a fixed place of abode, have no homes and no country; cannot by treaty surrender any lands, for they claim none. Such is supposed to be their condition." Huntington, with a Snake treaty in the offing, immediately controverted Alvord's statement, asserting that the Snakes had a sense of owning land, and that they claimed "all the land embraced in southeastern Oregon, together with parts of Idaho, Utah, and perhaps [sic] Nevada" (WR, pt. 2, pp. 810, 836-837). Statements made by numerous Northern Paiute witnesses in 1951 at the Reno hearings go far to substantiate Gen. Alvord's remarks (Reno Transcript, pp. 15, 30,

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K N 10/ 648 76. RCIA 1866 (CDS #1284) p. 89, Lindsay Applegate's first annual report to Huntington, dated Aug. 6, 1866. Applegate's reference to the "deputation of Yahooskin Snakes" may be the first instance of confusion of the Sprague River Klamath with the treaty-signing Yahuskin group. It will be recalled that the garrison at Ft. Klamath, in 1865, regarded "Moghenkaskit and his band ...as a sort of guardian of the border" and "depended on him for information of the hostile Snakes" (see fn. 55, above).

In attempting to make a treaty with Howlark, Applegate was acting on Huntington's orders (NA. BIA. OS. FP. Letter Book "H" pp. 735-737, Huntington to Lindsay Applegate, Salem, Ore., Oct. 21, 1865).

N 648 77. RCIA (CDS #1284) p. 89. Howlark declared himself for a continuation of the war and attempted to persuade Panaiña to leave the Reservation and join him.

000 78. Idem.

79. Idem.

80. Idem.

81. Idem. See also fn. 84, below.

82. NA. BIA. OSFP. Letters Received. Box "D," Lindsay Applegate to Huntington, Sept. 30, 1866.

N K 648 83. RCIA 1867 (CDS #1326) pp. 91-92; NA. BIA. OSFP. Letters Received. Box "D," Lindsay Applegate to Huntington, Oct. 31, 1866. By the fall of 1866, Klamath Reservation and Agency was becoming an established fact, although the Reservation had not as yet been surveyed (RCIA 1866 [CDS #1284] p. 24).

84. In his October 31, 1866 monthly report Lindsay Applegate informed Huntington: "There are no Snakes proper, on the reservation, but an attack by them or a raid by them for the purpose of stealing and plundering is daily and nightly expected by the Klamaths and Ya-hooskins...Fearing the Snakes the Yahooskins have moved down within a short distance of the Agency where most of the Indians have collected" (NA. BIA. OSFP. Letters Received. Box "D").

85. NA. BIA. OSFP. Letters Received. Box "D," Lindsay Applegate to Huntington, Jan. 31, 1867; see also RCIA 1867 (CDS #1326) pp. 91-92.

N K 222 648 86. "Fearing the Snakes the Ya-hoos-kins until very lately refrained from going into their own country (Sprague River Valley) [parentheses Applegate's] to collect roots which are now found there in great quantities, but I have lately organized a force of Klamaths and Yahooskins consisting of about fifty men armed and about as many women. This

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force is now in the lower part of Sprague River Valley digging roots..." (NA. BIA. OSFP. Letters Received. Box "D," Lindsay Applegate to Huntington, May 31, 1867).

87. RCIA 1867 (CDS #1326) p. 395; RCIA 1868 (CDS #1366) p. 812.

88. RCIA 1865 (CDS #1248) pp. 650-652.

89. NA. BIA. OS. Letters Received 1869. H-18. Huntington to N. S. Taylor, Commissioner of Indian Affairs, Umatilla Indian Agency, Dec. 22, 1868. "The chief object of the expedition was to visit the Snake Indian tribes, ascertain by personal inspection their precise condition, and take such measures as were in my power to secure a continuance of the peace recently inaugurated."

90. See 2. 3.

91. RCIA 1870 (CDS #1449) p. 516.

92. Idem; also RCIA 1871 (CDS #1505) p. 715.

93. Idem.

94. "Ocheo's band" (now known as the Surprise Valley Paiute) was brought to Yainax from Camp Warner late in 1869, as the result of a council at Camp Harney in November, 1869 (RCIA 1870 [CDS #1449] pp. 516-518, 531-532; Meacham, Wigwam, pp. 226ff.; NA. BIA. OS. Letters Received 1870. M-1045; NA. Record Group No. 98, U. S. Army Commands, Nov. 22, 1869). Part of Ocheo's group wintered on Klamath Reservation at Yainax until 1876-1877 (RCIA 1878 [CDS #1850] p. 612; Brimlowe, Bannock Indian War, p. 52), but after 1877 none of the group remained on the Reservation, as census figures for 1878 show.

95. See 2. 3.

96. NA. RCIA, OSFP. Letters Received 915, I. D. Applegate to Odeneal, April 30, 1872.

97. Ocheo's group; see fn. 94, above.

98. RCIA 1875 (CDS #1680) p. 618.

99. RCIA 1876 (CDS #1749) p. 218.

100. RCIA 1877 (CDS #1800) p. 300. This is from the Statistical Tables. The Agent's report of Aug. 22, 1877 reads, "Klamath Indians, 667, Modocs included in treaty, 93; Snakes included in Walpalla, or Yahooskin, 137" (ibid., p. 567).

101. RCIA 1878 (CDS #1850) p. 788.

102. RCIA 1880 (CDS #1859) p. 202; RCIA 1881 (CDS # 2018) pp. 202-203, 343.

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141. Stats. L., vol. 14, p. 683. One possible earlier mention of the Walpapi is contained in a letter from Indian Agent A. P. Dennison to J. W. Nesmith, Dalles, Ore., Jan. 17, 1859: "While at the [Warm Springs] agency I made a short trip into the Snake country and met about one hundred and fifty of the Wah Push Pel band of Snake Indians, they seemed much pleased to see me, treated me very kindly and the chief, We-ah-we-ah and eight of his headmen came to the agency and I made them a few presents. I think this band of Snakes would be very glad to treat with the Govt. for their lands. They are almost entirely destitute of provisions and near naked" (Na. BIA. OS. Letters Received).

142. Weawewa, who between the time Dennison visited him in 1859 (see fn. 141) and 1865 had become notorious for his raiding activities, had also been invited to the Walpapi treaty. He did not appear because some of the Paiutes told him that the Whites would kill him (Na. Record Group No. 98, U. S. Army Commands. DC. 9-K-1868. Wm. Kelly to George Williams, Camp Harney, Ore., June 25, 1868).

143. RCIA 1865 (CDS #1248) pp. 649-650.

144. Stats. L., vol. 16, p. 383; ibid., vol. 14, p. 683, art. 5.

145. A possible etymology for Yahuskin, in Klamath, has been suggested (p. 102). Wah-tat-kin may be the Klamath version of wada (Northern Paiute name for Suaeda depressa var. erecta Wats., the seeds of which were gathered for food [Whiting, Northern Paiute Sorcery, p. 19]) plus the Klamath suffix -kni, those of, people of, Anglicized as -kin (see p. 102).

Hoo-ne-boo-ey probably derives from N. Paiute hu.nibui (Lomatium macrocarpium C and R) the root of which was gathered for food (Whiting, ibid., p. 17).

Walpapi may be the Klamath form for wah push pel, presumably the N. Paiute name for the group with Weawewa in 1859 (fn. 141).

146. Treaties of June 9, 1855; June 25, 1855; Oct. 14, 1846 (Royce, Indian Land Cessions, pp. 804-805, 808-809, 834-835; pl. CLVIII, "Oregon 1,").

147. See p. 106 and fn. 70. This remark of Huntington's, although meaningless, has been frequently echoed; see RCIA 1866 (CDS #1204) p. 6; Klamath Boundary Commission, pp. 7, 19.

7: Whiting E-5 (1936-1938) 1950
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Upper Sonoran zone as described by Steward,[3] and consists primarily of desert shrubs, including many different varieties of sagebrush and greasewood. Around the lakes and along the streams there are grasses and other plants, the seeds, roots, or berries of which were used for food. Willow bushes also grow along the streams. Where the elevation is higher than 5,000 feet, juniper and mahogany trees are found. Deer, mountain sheep, and antelope live in the foothills and jackrabbits abound throughout the terrain.

The nature of the environment is such that although the region included approximately 6,192 square miles it did not support more than about two hundred individuals. This estimate is for the period just preceding the establishment of the Malheur Reservation in 1872 and would indicate that including the entire region over which the people wandered, the average density of population was one person per thirty square miles.[4] It is possible, however, that the population was denser at an earlier period, as stories are told of two bad epidemics which took a large toll of life two generations ago.[5] My estimate is computed from reports of the winter camp groups which existed in the childhood of old informants.

In the old days, the entire life of the Paiutes was oriented around the quest for food, which was none too plentiful. Around the first of May when the first green shoots broke through the ground, they left their winter camps and went to those places where they knew the early edible roots abounded. Nigger Flat, in the northeast corner of the valley, was the most frequented place and many families camped here while the women dug *epos* (Yapa, Carum oreganum Wats), *hu. ni'bui* (Lomatium macrocarpium C and R), *tsuga* and *sanatsuga* (unidentified). While the women were gathering these roots and preparing the *tsuga* and some *yapa* for storage, the men visited the Drewsey River to set up and repair their salmon traps so that they would be ready for the spring run. When their work was over, the women moved down to the river with their skin sacks full of roots and helped the men dry the salmon which they caught. When the run was over, the group broke up and families wandered off by themselves, hunting deer, sagehens, and other birds and collecting the different seeds and roots as they ripened. The first seed to ripen was the sunflower, *aki* and *kusiaki* (Balsamorhiza hooken Nutt). Later the women went to those places where *atza* (Sisymbrium Sophia L.) grew in large quantities. This seed was cached for winter consumption. Most of these early plants grew well in the northern part of the valley.

Around the fifteenth of July, families began to congregate at Cow Creek, about five miles east of Harney. Families from all over the valley and from the Hunibui Eater band to the north came to gather crickets. The women went out

[3] Julian H. Steward, *Basin-Plateau Aboriginal Sociopolitical Groups* (Smithsonian Institution, Bureau of American Ethnology, Bulletin 120), p. 17.

[4] See *ibid.*, p. 49, for contrast with other regions of the Great Basin.

[5] One of these may be related to the epidemic of measles which swept through the Cayuse and Umatilla in 1847.

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early in the morning and caught them, were back by sunrise, and spent the rest of the day roasting, drying, and pounding them and putting them in bags to be cached for the winter. In the evening the men and women gathered for gossip and gambling.

For the rest of the summer the families wandered off by themselves again. July was the month when ground hogs were considered to be the best. Currants and other berries were picked and eaten as they ripened. Fish were caught in the streams. Any game which was encountered was killed and eaten. The families often wandered up toward Seneca and John Day and hunted deer in the timber. In the fall some of the families went up to Canyon City, the men to hunt elk and the women to pick huckleberries.[6]

Around the first of September the families began to turn south to the vicinity of Malheur Lake and Saddle Butte. Everyone wanted to be on hand when the *wada* (Suaeda depressa var. erecta Wats.) ripened. This was one of the staple seeds and was picked in large quantities for winter consumption. Probably the largest number of people came together at this time and there were many festivities, including circle dances and games of all kinds. Other seeds were gathered at the same time or a little later: *su.nu.*—saltbrush, *tomomi* (unidentified), *i'ape* (Chenpodium), and *wata* (Chenpodium Album L.). From the lakes many people went to Crow Camp to pick chokecherries, which were made into cakes and sun-dried for winter. At this time there were also communal antelope and rabbit drives.

By the first of November the families started to collect their cached foods and to move into their winter camps. Sites were selected which had a spring or some other source of water, a good supply of wood, and where it was known that there was not likely to be a heavy snowfall. Most of the camps were at the foot of hills or in protected regions near the lakes. Here tule mat houses were set up. (During the summer sagebrush enclosures were the only types of structure used.)

The size of the camps ranged from three to ten households. The people who wintered in these camps did not always return to the same place and hence the personnel of the groups changed from year to year. The constituent households of a camp were sometimes related. For example, the group who used to winter at what is now the P Ranch consisted of about six households. Household 1 was made up of a man and his wife, an unmarried daughter, and a divorced son and his child. Household 2 consisted of a man, his wife and children, and an unmarried brother. Household 3 consisted of a man and his wife and his two unmarried brothers and one unmarried sister. The last two households were married couples with their children. The man in Household 1 was the father of the wife in Household 3. Other than this there does not seem to be any kinship tie between the different house-

[6] During these wanderings they were technically in the terrain of the Hunibui Eaters and Elk Eaters, but inasmuch as these people wandered to the south to get crickets and sometimes to get *wada* there was reciprocal exchange.

PLATE 4

342 ***Mono Lake Paiute dwellings.*** Plate 4, *top*, shows a temporary brush shelter of strictly pre-white period design and made of a simple framework of willow poles over which has been piled brush (sagebrush, *Artemisia*; or greasewood, *Sarcobatus*). The form of the stucture is a semicircular ground plan, with a large opening facing away from the prevailing wind. Such a temporary shelter served to house a family for a period of a few weeks while collecting the edible larvae of the *Ephydra* fly which breeds in Mono Lake as well as several other saline lakes of western Nevada. The larvae are called *Kutsavi*, and Mono Lake, which was the place of their greatest profusion, was the resort of many local Paviotso groups when they were abundant. A survey of the information on Kutsavi collecting has been published (Heizer, 1950). The picture shown here was taken by Dr. C. Hart Merriam at the east end of Mono Lake in August, 1901.

Plate 4, *bottom*, shows a family seated in front of another temporary brush shelter. This is a bit more substantial in that the poles (of willow, *Salix*, and cottonwood, *Populus*) are larger and a canvas has been tied over the outer surface to make it more windproof. While a frypan and metal cooking pot can be seen, a basketry water container with a pointed bottom is being held in the man's hands, and a large conical twined carrying basket can be seen at the extreme right edge of the picture.

The Paviotso of Mono Lake are reasonably well known to anthropologists, and among the better published studies the reader may be referred to those by Merriam (1955), Noble (1904), and Steward (1933).

PLATE 5

Mono Lake Paviotso brush shelters and Kutsavi. Plate 5, *top*, is a view of three temporary brush shelters built by Kutsavi collectors. In the foreground is a series of Mono baskets laid out deliberately in order to appear in the photograph. These are three light-colored, coiled bowls with dark geometric designs, at the left; then two twined canteens for water which are made watertight by smearing the exterior with hot pine pitch; in the rear are two large spoon-shaped, twined winnowing trays, and to the right four more coiled and decorated bowls which have served for cooking food by means of dropping hot stones into the liquid which they hold. Merriam (*op. cit.*, pp. 117–22) has described the basketry of the Mono group. This and the other two photographs on this page were taken by Dr. C. Hart Merriam on August 15, 1901 at the east and of Mono Lake.

Plate 5, *lower left*, is a close-up view of a Kutsavi collector's brush shelter which shows the rough pole framing over which the uprooted shrubs are laid and tied.

262 Plate 5, *lower right*, is a view of the shore of Mono Lake which shows, at the edge of the water, a windrow of the larvae of the small fly *(Ephydra hians)* which are called by the Indians Kutsavi. J. Ross Browne (1865, p. 417) describes the Kutsavi as a "rather disgusting deposit of worms about two feet high by three or four in thickness, extending like a vast arm around the shores of the [Mono] lake." And Mark Twain, in *Roughing It*, said of this feature of Mono Lake:

> "There are no fish in Mono Lake, no frogs, no snakes, no pollywogs, nothing, in fact, that goes to make life desirable. Millions of ducks and sea gulls swim about the surface, but no living thing exists under the surface except a white, feathery sort of worm one-half inch long which looks like a bit of white thread frayed at the sides. If you dip up a gallon of water, you will get about 15,000 of these. They give the water a sort of grayish white appearance. Then there is a fly which looks something like our house fly. These settle on the beach to eat the worms that was ashore, and any time you can see there a billion of flies an inch deep and six feet wide, and this belt extends clear around the lake, a belt of flies one hundred miles long. If you throw a stone among them, they swarm up so thick that they look like a dense cloud. You can hold them under water as long as you please. They do not mind it; they are only proud of it. When you let them go, they pop up to the surface as dry as a patent office report and walk off as unconcerned as if they had been educated especially with a view to afford an instructive entertainment to man in that particular way. Providence leaves nothing to go by chance. All things have their uses and their part and proper place in nature's economy. The ducks eat the flies, the flies eat the worms, and the Indians eat all three!"

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224 Cottontail rabbits were snared as they passed along their trails under willow bushes. A willow was bent over and secured with a string which choked the cottontail when the willow was released.

● 222 [221] *Eggs and young birds.*—After the Northern Paiute had obtained a supply of ground squirrels in the mountains, they returned to Humboldt lake in late spring to secure bird eggs, and young ducks before they were able to fly. The greasewood bushes near Perth were especially mentioned as a good place for the securing of duck eggs. At this season also pollen from the cat-tail rush was gathered to make candy.

226 [221] *Fishing.*—As soon as the willows began to put forth their leaves, the Northern Paiute went to Truckee river. At just about the same time that the young birds began to fly, the kuyui fish that wintered in Pyramid lake went up the river as far as Reno. The river is so steep that the fish got tired after spawning and hence did not go all the way up to Lake Tahoe. During the entire summer the Indians stayed on Truckee river and at Pyramid lake and dried large quantities of fish to take to their homes at Humboldt lake. After ice had formed in the river a stone ice pick was used to cut an opening across the stream in which was placed a seine net. A few men would be stationed at the net, then all the remainder of the band, women and children as well as men, would go up the river and then come down over the ice stamping and pounding with stones to scare fish downstream. When the crowd reached the net each person participating in the drive took a fish from the men stationed at the net.

226 825 From the names employed, it would appear that the Northern Paiute recognize four classes of fish and about nine species, doubtfully identified from the description by Natches as follows:[42]

1. awago.—Red sucker, 6 to 10 inches long in Humboldt lake, and 12 to 14 inches long in Pyramid lake. *Catostomus tahoensis.*

2. tai-pagwI.—A minnow or sucker, 3 inches long in Humboldt lake, and sometimes 5 to 6 inches long in Pyramid lake. The last part of the name is the root word, as Natches said, for all kinds of fish, while the first part seems to be descriptive of a variety. *Siphoteles obesus* or *Lesciditis pectinifer.*

3. hu-pagwI.—Minnow, 2 to 3 inches long in Humboldt lake; found also in Truckee river. *Richardsonius egregius.*

4. how-pagwI.—Minnow, 2 inches long in Humboldt lake; also in Truckee river. *Agosia robusta.*

5. agai.—Mountain trout, found at Elko and said to have formerly been in Humboldt lake; 10 to 12 inches long, weighing 1½ pounds. In Lake Tahoe it is larger weighing 2 pounds and having a maximum diameter of 4 inches. *Coregonus williamsoni.*

[113] [42] J. O. Snyder, The Fishes of the Lahontan System of Nevada, in Bull. U. S. Bureau of Fisheries, 35, Document 843, pp. 31–86, 1917. Ten genera and 14 species of fishes native to the Lahontan basin are described.

13:1 oud U-5 (1914) 1929 NR13 Northern Paiute NR13

[824] [285] sobI, willow, *Salix*, used in making baskets. Name shortened to so in composition; for example so-on, "willow-bottle," or bottle-shaped basket. Gosiute word for willow si-opi.

[261] sikupi, sikupI, rayless goldenrod, *Chrysothamnus*. If a worm gets in the stem of a young plant it causes a bulbous swelling just above ground. Girls will search diligently for these, in order that they may obtain a chewing gum.

[262] sano, tumble-weed, *Amaranthus graecizans*. The small, flat, leaf-like seeds are hulled and eaten. Gosiute su-no is the name for *Atriplex*. Tumbleweed is supposed by botanists to be an introduced species of modern times.

[227] taEpi, greasewood, *Atriplex torreyi*. Short sections of the crooked, hard, thorn-like twigs are peeled and attached at a crook to a string for use as a fishhook (chotetema) for catching minnows. A great many of these hooks are left in the water overnight. In the roots of this bush there are yellow worms an inch in length which "smell good and are good to eat." They are also used as fish bait.

[262] [226] [222] tibipi, nut pine, *Pinus monophylla*. The nuts which are gathered on the Stillwater range, are called tibi. Gosiute, ti'-ba-wa-ra, nut pine, and ti'-ba, pine nuts.

[283] tegapo, for making of coarse string. Compare Gosiute tin'-ai-gop, nettle, *Urtica holosericea*.

[262] [302] [291] toi, toy, cat-tail rush, *Typha latifolia*. The pollen, tsima, is gathered, inclosed in the leaves of the rush and roasted in the ashes, causing it to become hard and sweet like candy. Pollen is also used for face paint. The down is used for sandal padding. The seeds are eaten. The Gosiute name of the plant is to'-iump.

toibE, spike-rush, *Eleocharis palustris*.

[227] [411] [172] tonobI, donobi, greasewood, *Sarcobatus vermiculatus*. Fishhooks are made from the twigs, which however, are inferior to those made from the twigs of *Atriplex*. The roots are also infested with the same worm as found in *Atriplex*. Arrow points for small animals and birds were made from greasewood. *Sarcobatus* was a favorite wood for the manufacture of various articles found in the cave. It is very hard and close grained. Gosiute, to'-no-pi.

[262] wai, bunch grass with a small seed which was eaten. Gosiute wai signifies mountain rice, *Oryzopsis cuspidata*.

wakwobobE, cano, *Phragmites communis*.

weyupuie, a red berry smaller in size than small peas and containing little seeds. The berries are washed before using. They grew upon a gray-leaved thorny bush, 6 to 12 feet tall. The description agrees well with that of the buffalo-berry, *Shepherdia argentea*.

[283] [227] wiha, a plant growing along the rivers under willows. It has a straight stem the size of a pencil with branched top about 3½ feet high. The fiber is used in making fish nets. Chamberlin states that the spreading dogbane, *Apocynum androsaemifolium*, a plant answering our description, is that from which the Gosiute obtained a strong fiber for string and rope. Natches also gave the name tegapo for cord 4 mm. in diameter. Possibly this is the word for coarse cord rather than the name of some other fiber plant, as he stated that wiha was made into cord 4 mm. in diameter to be used for the top of a fish net. The fiber is reddish when new but is colored a deeper red with pine bark which floats down Truckee river.

13:Loud U-5 (1914) 1929 NR13 Northern Paiute NR13

Gathering seeds.—By October various seeds were ripe. The seeds of the triangular-stemmed tule, *Scirpus nevadensis*, were especially mentioned, also the seeds from the cat-tail rush, *Typha latifolia*. The fine down to which the cat-tail seeds are attached is spread upon the hard ground of a playa to the depth of 1 or 2 inches and over a space of 5 to 10 feet in diameter. It is then burned. More of the down is gradually added and continually stirred with sticks in order that it may be fully consumed. At the end of a hard day's labor there may be a sufficient quantity of seed upon the ground to fill several sacks. The method of removing the nut-like shell of these and other minute seeds is explained in discussing the various implements. It was a common thing to make porridge of several seed meals mixed.

The one-leaf pifion, *Pinus monophylla*, a tree 8 to 25, or rarely 45, feet in height, is found on the range east of Carson sink at an elevation of over 1000 or 1500 feet above the valley. It formed so important a source of food that different bands of Northern Paiute held proprietary rights to certain tracts. Winnemucca claimed the particular mountain on which is located the mythical "Weasel trail," described later (p. 160; no. 1, pl. 68). Late in autumn the nuts were gathered and secreted in piles until opportunity presented itself for transportation.

Basketry.—The typical Northern Paiute hulling basket (tema) is a flat triangular tray, while other tribes, as well as the cave people, had circular hulling trays. A layer of seeds is placed upon such a basket, and pressure applied with a circular motion with a flat stone. This cracks the nut-like seed coverings, after which the kernel and shells are separated by winnowing. A hulling basket may be of coiled (pl. 30a) or other weave, but it must be a tight weave, as it is used to hull small seeds. Tema baskets are also used in roasting seeds, either before or after hulling, by placing them on the basket with coals and shaking. For the hulling of pine nuts and the larger seeds a coarser basket called yata may be used.

A flat wicker tema basket, triangular in shape, 24 by 30 inches in size, was found several miles north of Lovelock cave, at the base of a cliff, at an elevation of some 300 feet above the level of the plain. It is undoubtedly a Northern Paiute specimen left on the spot in recent decades. It is made of willow, there being 32 warp rods and 40 courses of woof to 10 centimeters. The woof is single, unlike that in baskets found in the cave, and passes over two warps at a time, giving the basket a superficial appearance of being of diagonal twined weave.

103
133

passes but a short distance from this feature in T29N/R15E.

17. Páhino mutsakian° ("Limestone Rock Point"). This point, which exhibits wave cut terraces from ancient Lake Lahontan, is but a short distance west of the Gibson ranch. Highway 395 passes several hundred yards south of this feature. It got its name from the rocks that are covered with calcareous tufa from the waters of Lake Lahontan.

18. Atsa kaduhk" ("Red Mountain"). Shaffer Peak and its integral domes and peaks, including the peak just north of Litchfield and the dome north of the Gibson ranch, are given this name. The latter, however, is said to have had a name of its own but is now forgotten. The south side of this dome, or rounded peak, was a favored area for gathering atsá seeds (probably Sophia sonnei) for food. (The Gibson ranch is about two miles east of Litchfield on Highway 395).

19. Tubisha muha ("Red Adobe Moon"). This feature was so named because of the color of the soil there and because this saddle-shaped pass resembles the moon when it is in its crescent phase. This low pass lies between Honey Lake Valley and Secret Valley and is utilized by both Highway 395 and the Southern Pacific. The area is located in T30N/R15E.

20. Wahahu ("Hay Flow"). Smoke Creek was given this name because the aquatic plants appear to flow downstream as they undulate in the current. Smoke Creek rises on the east side of Shinn Peaks and flows into Nevada.

21. Pakwí patutspuh ("Fish Splash"). Rush Creek, about five miles south of Smoke Creek, was given this name because of the fish that jumped in this stream. As with Smoke Creek, Rush Creek also flows into Nevada.

22. Pasö katuduh ("Willow Set"; "set", in this sense, means "place", or that something is "situated"). This is the name for Mud Spring, or Bull Flat as it was later called.

23. Tubihsha nöna ("Red Adobe Set"). Mud Flat was given this name because of the color of the mud in this playa lake. The lake bottom is covered by a blanket of wild sunflowers after the water dries up each year. This made it a favorite place for the Wadátkuht to collect sunflower seeds. This feature is situated at the south side of Secret Valley and is bisected by Highway 395.

[222]

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22 seasons usually were prepared during the winter months to
185 feed themselves adequately. We thus have the real life
735 enactment of the fable of the grasshopper and the ant, except that in this case the grasshopper did not get taken in and fed. Those households having an adequate winter supply of
22 food, when visited by their hungry fellow camp members, re-
476 marked to the hungry visitors how poor and hungry they, too,
735 were. They also told them that the prospects of getting any fresh meat were dim because they had holes in their moccasins and could not go hunting in the snow. When it became obvious to the hungry visitors that they were not going to get any
[252] food they returned home as hungry as they came. However,
[262] just as soon as the hungry people left and were out of hear-
[264] ing, the provident family prepared a meal by quietly grinding acorns into flour which was ultimately mixed with sunflower seed flour and cooked as a mush. This was usually eaten with dried deer meat. The preparation of the meal often occurred very late at night, at a time when hungry neighbors were asleep and could not hear the preparations for the meal.

735 Harsh treatment to hungry neighbors, such as has just
476 been related, apparently fell upon those individuals or families too lazy to provide for themselves. Those who lost their food supply through no fault of their own, or those people dependent upon their relatives (e.g., old parents and children) were given more consideration than those whose hunger stemmed from laziness.

222 The following is a listing, by season, of the resources obtained from the Wadátkuht environment. This listing is not exhaustive but gives a reasonably complete account of the subsistence activities of the Wadátkuht Paiute.

[133] It should again be pointed out that the Wadátkuht were
[262] exceptionally fortunate to have within their territory a portion of the Sierra Nevada mountains. It was from this portion of their habitat that they obtained quantities of acorns, a food item which tended to make their existence more secure than that of their more desert oriented relatives.
[251] Acorns could be stored for two or even three years, thus insuring against famine. There was, however, danger of the acorn crop being frozen by an early frost before they had been gathered, dried and stored. In addition to the all-important acorn the Wadátkuht had numerous varieties of plants with which they were familiar and from which they could gather quantities of seeds, berries and roots. Unfortunately, it was not always possible for the author to make a full

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identification of the various plants. 222

In the spring suckers were caught in numbers as they swam up Long Valley Creek to spawn. These fish were caught in nets, often by torchlight at night. After being caught the fish were laid out on the surrounding sagebrush and allowed to dry in the sun. During the spring the eggs of such birds as geese, ducks, pelicans, quail and others were gathered and eaten. The favorite place to collect waterfowl eggs was in the region where Susan River flows into Honey Lake. At about the time that the suckers were running in Long Valley Creek the Wadátkuht would gather padus[a] (a plant said to be similar to wild chive), a'wuhk'koni' ("wild onion") and kwidu'pa' (a small round, black root" wherever they occurred. The tops of padus[a], which had a white blossom and looked like chives, were eaten. A favorite place for this plant to grow was under willows along streams. [226] [251] [262]

It was not until summer, however, that the products of the land became more plentiful after the cold winter months. The following are summer products. The small yellow seeds of the guha (Mentzelia sp.) were beaten into a conical burden basket with a seed beater when the seeds became ripe. The favorite place for gathering these small seeds was on the southern exposure of Bald Mountain (Guha kaive). These seeds, however, were gathered wherever else they grew abundantly. Kitty Joaquin told of gathering five alfalfa seed bags full of unwinnowed guha seeds from the south slopes of Bald Mountain. [252]

After collecting guha it was time to gather atsá seeds, which grew best on Gibson Mountain (the hill behind the Gibson ranch) east of Litchfield. Gibson Mountain is a portion of Shaffer Peak (called Atsá kaduhk[w]). The seeds of atsá are rusty red in color and are about the same size as the guha seeds. Atsá is probably tansymustard (Sophia sp.)

Wada (Suaeda depressa) seeds (from which this Paiute group got its name) were gathered after atsá had been harvested. Wada was most abundant in the vicinity of Amadee on the east side of Honey Lake. These small black seeds are about the size of guha seeds and were stored in smoke-tanned buckskin bags made of two hides sewn together. [101] [251] [415]

The atsá, the guha and the wada seeds were gathered in the same manner and were prepared similarly. The seeds were

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222 winnowed to remove foreign material, then reduced to a flour with a mano and metate and made into a soup. Flour from the atsá seeds could be mixed with snow in the winter to make "ice cream".

In the summer currants, called pokop'shia (Ribes sp.), were picked near Standish. In mid-summer red raspberries (Rubus sp.), called atsá pui, were gathered on Parker Creek and behind the 42 ranch (between Milford and Buntingville). Raspberries were eaten fresh or were dried for winter use.

About the beginning of August, before sunflower seeds were harvested, yapa and moa roots were dug in the Last Chance Creek area in Plumas County. Dixie Valley, in that area, is called TasuP ("Wild Game Spot") because it was a good place to hunt deer. Although the Wadátkuht went there to gather roots and presumably to hunt the region belonged to the Washo according to Gladys Mankins.

222 252 The moa bulbs (unidentified), after having been unearthed with a digging stick and washed in a basket sieve, called yuhtá, were put in a large pile in a preheated pit lined with flat stones. Hot stones from a second fire were put on top of the bulbs and covered with oak leaves or fir branches. The oven was opened "after several days". The bulbs were removed from the oven and mashed with the hands and made into patties which were dried in the sun. A flat stick was used to turn the patties over as they dried.

222 [251] [415] [482] The Joaquin family remained in the Last Chance area for about a month each summer gathering roots and drying the patties. At the end of this time the patties were loaded into conical burden baskets, called túma, and carried back to the main winter camp of Matá at Milford.

[252] While in the vicinity of Last Chance and Indian Creeks in Plumas County wild rhubarb was gathered at about the same time as yapa (possibly Carum sp.) and moa. This plant was eaten raw but was not too well liked because it was too sour.

[413] [251] [252] Seeds of two kinds of sunflower, pákuh and akú, were gathered after wada was harvested. A seed beater, called tsiku, was used to knock off the heads of the sunflowers into a burden basket. The heads were taken home and beaten in order to knock out the seeds. The seeds were stored away to be hulled and ground as needed. The ground seeds produced a flour, called aki, which was eaten without further preparation, or could be cooked into a mush.

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222 [251] Seeds of the sunflower were parched oftentimes before being stored away. Parching, called sagá, is differentiated from heating seeds somewhat like popcorn, an action termed kutsí kwu't. Flour from these seeds was considered to be more a dessert than a staple. An important place for gathering sunflower seeds, particularly for the Secret Valley Wadátkuht, was at Mud Flat (Tubisha nöna).

[252] Chokecherries, called ta'shabúi ("deep-red chokecherry"), were picked before going to gather pine nuts. The chokecherries were prepared by being pitted in a sieve. This was done by rubbing the flesh of the chokecherries through the interstices of the basket leaving the pits in the basket. This action was called tudá kwidᵃ. The mashed chokecherries were made into patties and dried for winter use. When the patties were soaked in water "they become fresh, they taste good". A favorite place for obtaining chokecherries was along Parker Creek near the village of Kasawihnaid.

[251] Elderberries, called hubú, were gathered at the village of Wiuhpa woiyuadᵃ, or at least in this vicinity, when they became ripe in the late summer or early fall. The berries were gathered by picking the complete stem, or bunch, then drying them that way. An energetic person might pick the berries from the stem.

[252] Late in the summer nishu (apparently Mormon crickets) and kúa (locusts), when they occurred in great numbers, were gathered for food. Good places to collect nishu were Secret Valley and in the vicinity of Doyle. They were collected by being scraped into a container with the hands, or by being picked from sagebrush where they would be clustered in great numbers. The gathering had to be done early in the morning before the insects became warm and active. After they had been gathered a pit would be dug into the ground and a fire built in the pit. When the fire was reduced to a quantity of hot coals the insects were dumped into the pit and immediately covered with earth. From time to time they were sampled to see if they were done. When cooked the insects uncovered and removed from the pit and laid in the sun to get perfectly dry. After drying they were sacked for future use. Before they were eaten, however, their heads and legs were pulled off and discarded. The body was ground into a flour with a mano and metate and eaten dry, or made into a soup which had a flavor somewhat like that of dried deer meat. (Deer meat also could be ground into a flour coarser than acorn flour and made into soup.) Flour made from nishu could be salted to taste when eaten.

[251] [252] [263]

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222 Kúa were caught and their legs torn off immediately and then prepared in the same manner as nishu. The kúa were caught wherever they were found in sufficient quantities and were simply picked from the brush, apparently while cold and inactive in the morning.

[224] Yapa and hunípui roots were dug in June or July in the vicinity of Eagle Lake. While in the area the Wadátkuht hunted ducks and deer. Excursions were made to Eagle Lake despite the fact that it lay outside their recognized territory.

Also utilized for food were píshta (wild plum) and tsanab[i] (a round fruit similar to the wild plum). These were gathered in the late summer wherever they were available in quantity.

272 Pleasant hot drinks were made from dútu (Mormon tea) and from tatsí tun'[a] (peppermint). These plants were dried and boiled to make a tea. The informants knew of no use for the manzanita berries.

222 After the sunflower seeds and the chokecherries were harvested the Wadátkuht would go after pine nuts (tubá mai, "pine nut go") in the vicinity of Virginia City, Nevada. By this time it was in the fall of the year. The pine nuts were gathered as quickly as possible so that the people could return home in time to gather acorns. A single family might gather about ten sacks of pine nuts in a season. The informants did not make it clear whether the Wadátkuht made this [177] trip for pine nuts before contact times or not. Since the distance is well over 100 miles one might guess that not until the introduction of the horse did the Wadátkuht utilize the pine nut to the extent indicated by the informants.

[252] Wild rose berries (tsiá bui) were eaten fresh when ripe and are said to "taste like persimmons".

The most important single food plant product in the [137] Wadátkuht territory was the acorn. The two major places for gathering acorns were in the timbered belt of oaks and pines between Buntingville and Milford and were called Wiuhpa woiyuad[a] and Wiuhpa wutsakian[o]. Acorns often could be gathered in large enough quantities some years to last for two or [251] three years. Excess acorns were stored in a pit dug into the ground and lined with oak leaves, pine needles, and similar material. The pit was covered over and the acorns were dug

222 [251] up when they were needed. Usually when they were dug up they were easier to crack as they had swollen.

Both "Sour-dock" and "Pig Weed" were eaten as greens. An aquatic plant called masaidup (possibly watercress) was also eaten fresh.

227 Bone fish hooks were used and were called túta. Kitty Joaquin could not recall what they looked like but said that "some old men still make them for use in Pyramid Lake". It seems probable that she had reference to bone gorge hooks.

An "A" frame type dip net was used for catching fish from a tule balsa on Honey Lake and its sloughs.

The informants did not say that they used conical fish traps but they had seen ones of willow used by a few Paiute people around Pyramid Lake. Fisherman were called hakaigiad.

226 Both Long Valley Creek and the sloughs in the delta of Susan River were considered to be good places to fish. Types of fish caught include a sucker (ak'wugh^{o}), a small "trout" (pakwi), large trout (agai), and catfish (not native), (musungíb pakwi, "whisker trout").

262 Birds eaten by the Wadátkuht include the small blue heron (wasá), the white swan (wohit), the Canadian honker (nagút), ducks (pohü), avocets (kuti kuti) and blackbirds (pakoduhpa). [223] Pelican, duck and geese eggs were gathered in the swampy region near the mouth of the Susan River.

Small mammals eaten by the Wadátkuht include the porcupine (mohü or tsagüd), Golden-mantled squirrel (tabá), chipmunk (woda'), wild cat (tuhu), badger (huna), and marmot (kidü). Several types of rabbits, especially the jackrabbit, were of considerable importance to the Wadátkuht.

224 Rabbit drives were usually made in the fall and winter. A long net held up by a series of sticks was used for this purpose. A number of people would drive the rabbits into the net while several men watched the net. When a rabbit hit the net he became enmeshed because the net fell on him. The men tending the net killed the rabbits and hung them by their heads from a belt around their waists.

Rabbits were attracted to the hunter who made a "kissing" sound with his lips. This sound was similar to that made by

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281 [412] To tan a hide was called tusungóiya, and to scrape the hair from a hide was called puwhan[a]. A draw knife (modern) and a deer rib scraper have the same name, púwhanan[u].

224 [283] Secret Valley was one of the places in which antelope were hunted. All of the families would gather together and each family would manufacture a rope of sagebrush bark which would be tied to the rope made by the other families. The long rope was strung from piles of brush and stones placed in a circle about one-half mile (in diameter?). The brush formed a reasonably solid fence. The rope had strips of sagebrush bark hanging down from it and when the antelope got near the fence the people would jerk the rope and shake the fence to scare the animals back away from it.

The hunt was usually undertaken in March when the ground was wet and the antelope became easily tired. The frightened animals became tired after going around the circular enclosure two or three times. As soon as they were tired they were stoned and clubbed and then caught and their necks broken. Bows and arrows were not used as the antelope got so tired they would lie down and even the children could kill them.

[756] [784] The night before the antelope drive the doctor, or shaman would sing a song that would cause the antelope to lose their sense. The following day the people would simply go out and drive them into the corral.

[136] Buffalo (paguts) were taken with the bow and arrow but were so strong that often numerous arrows had to be shot into them before they fell. These animals were scarce and were exterminated in the Wadátkuht territory circa 1830 (Riddell, 1952, pp. 168-169).

Hunters were called tuwhawoigia.

222 263 Some of the products used by the Wadátkuht had to be obtained from outside their territory. Joaquin is said to have gotten salt (ong av[i]) at Gerlach, Nevada, in Kamötkuht territory. It was "dug from the ground" and had to be ground on a metate before it could be used. The Wadátkuht also traded with neighboring Paiute to obtain papus[i], a small black root used for food. It was gathered near Yerington or Smith Valley, Nevada, and was prepared in the same manner as sunflower seeds. Another root, tunui[yu], was traded from the people living in Dixie Valley in Lassen County. The Wadátkuht call these Pit River people Tunui[yu]tkuht.

439 262

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222 The buckberry (wiápui, "iron seed", Elaegnus sp.) was enjoyed by the Wadátkuht but does not grow in their territory. These berries had to be gotten to the east about Gerlach, [439] Winnemucca and Yerington, Nevada. They were undoubtedly obtained through trade and visits to the areas in which they grew.

The buckberry was good to eat fresh and "tastes like fresh huckleberries". One person held the limb of the bush [251] down while another person beat the berries off into a basket. The berries were dried and stored to be used as needed. [252] Dried berries were boiled for about fifteen minutes and then strained through a basket sieve to remove the seeds.

MATERIAL CULTURE

342 Habitations. The relatively permanent, or winter type of house was the conical, tule covered structure called kani. Susy Buster said that no excavation was made for this house but Kitty Joaquin and Gladys Mankins said that a pit about one foot deep was excavated. Whether a pit was dug or not was probably left up to individual preference. The ground plan was circular and ranged from ten to fifteen feet in diameter. Vertical willow poles (Susy Buster said juniper poles were used) were sunk into the ground in a circle, and at the rim of the excavation. The willow poles were about ten feet long and were lashed to a hoop of willow at their upper extremities. The willow hoop was about eighteen inches in diameter and served as the smoke hole. The vertical uprights standing in a circle had, of course, to be bent inward to be lashed to the ring. Several, Susy Buster said three, horizontal elements of willow encircled the vertical, or rather upright elements to give additional stability to the house. The structure was then covered with tule matting (not mentioned by Susy Buster) and then with shingled frames of tules. These frames, called sikwat, consisted of two poles about eighteen inches apart with tules attached to a depth (thickness) of about six inches. These frames of tules were put on in such a way that they provided a shingled pattern. That is to say, both the frames and the underlying tule mats were first attached to the bottom of the house. The dirt from the excavation was banked around the outside of the house and brush piled all around the house for a windbreak and fuel supply for the winter. A ditch also was dug around the house to carry away rain water and melting snow.

Wadatkuht

[P. 90]

Plate 3

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● 222
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b. Frame of sweat house

d. Gathering obsidian

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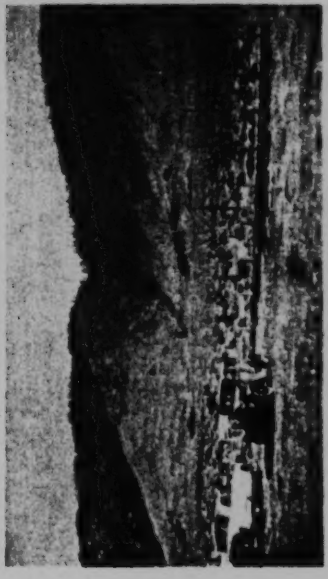
a. Bedrock mortars at Mariš



c. Kahwa'ha or "Wind Hole"

[End Plate 3]

Wadatkuht

[P. 92]

Plate 5

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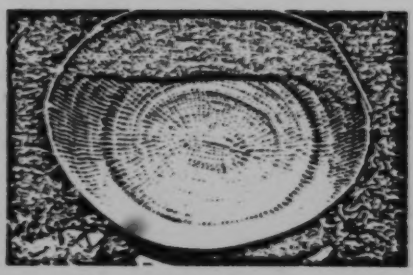
[252]

a. Washing "wild potatoes" with palm, "stove"



b. Coiled basket

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c. Digging "wild potatoes"

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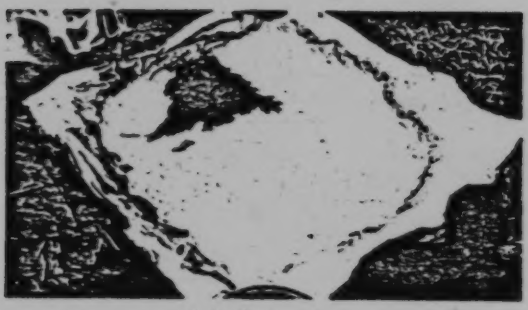

d. Looking [illegible]

[End Plate 5]

The Aboriginal Situation: The Paiute

182 22 [177] At the time of first contact the subsistence activities of the Paiute were based on an exploitation of a none-too-provident environment. The small groups of Paiute who lived together -- with the exception of those occupying the fertile Owens Valley -- appear to have been on the move almost constantly. Harvests of seed had to be made within a few days or weeks at the most, before the ripened seeds were scattered on the ground. Roots, berries, rodents, snakes, fish and insects were sought. Of primary importance were the pinenuts of the mountain areas. These provided a major source of food for survival through the winter. A general survey of foods available suggests that the area could support a larger number of people than 161 it actually did (Steward, 1938, 14-33). Population figures show a high density in the Owens Valley (2.1 sq. mi. per person) to a low at Beatty (44 sq. mi. per person). In the area immediately to the north of Washo country -- called vaguely the Humboldt River country, in which the Carson Sink, Pyramid Lake and Humboldt Lake are located -- density ranged from 2.5 sq. 132 mi. per person at Battle Mountain to 5 sq. mi. per person at Halleck and 161 Wells (Steward, 1938, 48-9). The sporadic rainfall of the area was a lim- 22 iting factor, often failing completely and reducing plant harvests, so that 182 population appears to have been geared to the minimum rather than the maximum food supply.

224 I have included rodents, fish and insects under the gathering aspects [226] of Paiute life. The pronghorn antelope, the jack rabbit, the mule deer and [222] mountain sheep were the animals most frequently hunted. The first two species appear to have been hunted largely in communal drives. The mule deer was hunted occasionally by groups who drove the animals into ambush or over cliffs (Stewart, 1941, 366, 422). Dogs were used by some bands to aid in deer hunting (Stewart, 1941, 422). Deer were also hunted by individuals or small groups of stalkers, a method that appears to have been the only one used to take mountain sheep where these animals were available.

Rabbits were perhaps the most important hunted species because of their relative abundance. Antelope herds were almost totally depleted by a single drive and could not be hunted in the same area for a number of years. [476] The antelope and rabbit were significant in terms of social organization be- [571] cause the communal hunts were among the few occasions when any large number of Paiute assembled in the same place. This, however, was limited by the period of time the captured game could support a large group of people.

182 In general the ecological adaptation of the Paiute was one of small groups of people shifting within relatively wide areas in response to the ap- 22 pearance of various wild crops and animals. The pinenut appears to have

been the most important single source of food, providing sustenance through the midwinter months when no other plants were available because it grew in large quantity and could be stored for relatively long periods.

A loosely structured bilateral band of family groups appears to have been the most important unit besides the family itself. The membership within a band was apparently very fluid, since families shifted bands or left the company of other families in the pursuit of food. Communal hunts for antelope or rabbits brought several bands together under the special direction of a shaman or rabbit boss. Exceptionally good gathering conditions also concentrated people, but there appears to have been no tendency for larger groupings of gatherers to involve more than a number of separate bands operating in the same area. This is in part because of the nature of gathering -- as opposed to rabbit or antelope hunting -- where cooperation did not necessarily produce more food. Except for these two situations, supraband organization and leadership appear to have been nonexistent. Within the band, leadership was informal and nonauthoritarian. Tribal identity, except for a broad differentiation between Northern Paiute and other Paiute, Shoshoni, Bannock, and Ute and the Washo, as well as the various neighboring California tribes, appears nonexistent at this time. All the Paiute were never assembled for any enterprise, although bands may have assisted each other in war against some common enemy. There appears, however, to have been no real war among the various Paiute bands. Disputes were settled by arguments, fights and skirmishes in which rocks were thrown (Steward, 1938, 238).

The Aboriginal Situation: Washo

The Washo occupied the area between Lake Tahoe and the Pine Nut Mountains east of Reno. The north-south extent of their territory appears to have been from Honey Lake to Antelope Valley. There is archeological evidence as well as the testimony of informants that Washo territory once extended well into California, perhaps to the edge of the San Joaquin Valley (Heizer and Elsasser, 1953; Kroeber, 1925, 391). Linguistically they represent an isolated fragment of the Hokan stock; the Paiute are part of the great Shoshonean stock of wide distribution in the Basin.

Unfortunately the ethnographic information on the Washo is far less complete than is that on the Paiute. However, there is nothing to suggest, in the information on hand, that the Washo differed markedly from the Paiute in subsistence activities, social organization or culture.